

SERVICE MANUAL



EP720 Family/EP726 Family

Date	Revise Version	Description
2007.11.2	V1.0	Initial Issue
2007.11.28	V2.0	Add Appendix A
2008.12.19	V3.0	Add in extended models. Modify "Brightness" spec in chapter 1. Add in "Forgetting Password" in chapter 3. Add in "Defect specification table" in chapter 4. Modify "Serial Number System Definition" in Appendix A.

EP720 Family	EP720, EP720i, DS306, DS306i, CB2000, DX720, S22 E, S25, GT-3000, OPS1900, PV2223+
EP726 Family	EP726, EP726i, DX606, DX606i, DX606V, EP726S, EP726V

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EP720&EP726 Comparison List					
EP720			EP726		
80.89U01G001	C	PCBA MAIN BOARD FOR EP720	80.89V01G001	B	PCBA MAIN BOARD FOR EP726
48.87K01G001	A	DMD Type-X 800x600 PIXEL 0.55" SVGA LVDS	48.87M01G001	A	DMD Type-X 1024x768 PIXEL 0.55" XGA LVDS

EP726 Family Comparison List				
Model Part	EP726/DX606i/ DX606/EP726i	DX606v	EP726v	EP726S
DMD	48.87M01G001	48.89B01G001		
PCBA MAIN BOARD	80.89V01G002	80.8CN01G003	80.8CN01G002	80.8CN01G001
POWER CORD	42.50112G001			42.81004G001

EP720 Family Comparison List						
Model Part	EP720/DS306/ DX720/ OPS1900/ EP720i/DS306i	PV2223+	S22E	S25	CB2000	GT-3000
SPEAKER	49.88N03G101				NA	49.88N03G101
IO COVER LABEL	35.89U01G001				35.89U01G011	35.89U01G021
SCREW PAN MECH	51.88N11G001				NA	51.88N11G001
MAIN BOARD MODULE	80.89U01G002		80.89U01G012	80.89U01G014	80.89U11G002	80.89U01G013
POWER KEY PC	51.89U02G001		51.89U02G011	51.89U02G011	51.89U02G001	51.89U02G021
TOP COVER	51.88N06G031	51.88N06G011	51.88N06G081	51.88N06G0F1	51.88N06G031	51.88N06G0E1
LED LENS PC	51.89U03G001	51.89U03G031	51.89U03G011	51.89U03G011	51.89U03G001	51.89U03G011
POWER CORD	42.50115G001	42.81004G001	42.50112G001 42.53506G001	42.50112G001 42.53506G001	42.50112G001	42.53506G001
BOTTOM COVER	75.88N07G001					75.88N07G011
ELEVATOR FOOT PC	51.88N22G001					51.88N22G011
ADJUSTA- BLE FOOT RUBBER	52.88N07G001					52.88N07G011
FOCUS RING COVER	51.88N10G001					51.88N10G011
IO COVER	51.89U01G001					51.89U01G021
LAMP COVER MODULE	70.88N22GR01					70.88N28GR01
ZOOM RING COVER	51.88N12G001					51.88N12G011
FOCUS RING	51.88N04G001					51.88N04G021
ZOOM RING	51.88N05G001					51.88N05G011
LENS CAP MODULE	75.88N04G001					75.89F02G001

Preface

This manual is applied to EP720 Family/EP726 Family projection system. The manual gives you a brief description of basic technical information to help in service and maintain the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products. We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background. Please send the product back to the distributor for repairing and do not attempt to do anything that is complex or is not mentioned in the troubleshooting.

Notice:

The information found in this manual is subject to change without prior notice. Any subsequent changes made to the data herein will be incorporated in future edition.

EP720 Family/EP726 Family Service Manual

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Manual Version 3.0

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Introduction

1-1 Highlight

No	Item	Description
1	Technology	- Single 0.55" SVGA Type-X DMD chip (EP720) - Single 0.55" XGA Type-X DMD chip (EP726)
2	Dimension (WxDxH)	- 259x 188 x 71.5 mm (foot height not included)
3	Weight	- < 2kg (4.5 lbs)
4	Tilt Angle	- 6 degrees with elevator mechanism Minimum requirement: one push button and one adjust knobs for height adjustment - -2mm to +8mm)
5	Power Supply	- 100V ~ 240V +/- 10% 50/60Hz
6	Power consumption	- 260W (Maximum). Standby mode - < 10 Watt 110V AC
7	Resolution	- 800x600(EP720) 1024x768(EP726)
8	Brightness	- Typical : 1900 lumens Minimum: 1615 lumens
9	Contrast	- Typical: 1800:1 Minimum: 1400:1 full on/full off
10	Uniformity	- Typical : 80% Minimum:65%
11	Throw ratio	-1.95 ~ 2.15:1 distance/width
12	Projection lens	- F# 2.41~2.55, f = 21.8~24.0 mm ,1.10X Manual zoom/focus
13	Lamp life	- 3000/2000 (ECO/STD)
14	LED Indicator	- Burn-in mode: Power LED (Green) & Error LED (Red) / (2 sec on & 2 sec off) - Standby: Power LED (Green) / (1sec on & 1sec off) - Warm start: Power LED (Green) / (0.5 sec on & 0.5 sec off) - Lamp strike retry 4 times: Error LED (Red) / (0.5 sec on & 0.5 sec off) - Lamp fail: Error LED (Red) / solid on - Fan fail: Error LED (Red) / (2 sec on & 2 sec off) - Over temp. : Error LED (Red) / (1 sec on & 1 sec off)

No	Item	Description
15	Video compatibility	- NTSC: M (3.58MHz), 4.43 MHz, 480i/p @60Hz PAL: B, D, G, H, I, M, N, 576i/p @50Hz SECAM: B, D, G, K, K1, L HDTV: 480p, 576p, 720p, 1080i (50/60 Hz)
16	Aspect ratio	- 4:3 with support for 5:4 and 16:9: 1.78:1 (anamorphic DVD & HDTV)
17	Color wheel	- 5 Segments R80Y30G84W90B76, 2x
18	Lamp	- 180W User replaceable (Phoenix FEX88) Must have ECO mode
19	Temperature	- Operating: 5 - 40°C - Storage: -20- - 60°C
20	Form Factor	- New X15 type – A39 design language
21	Displayable colors	- 16.7 million colors 256 shades of gray
22	Projection distance	- 1.0m to 12m (mechanical travel)
23	Input connections	- 1x D-Sub 15 pin connector for analog RGB/component video/HDTV and supports SCART RGB signal (via an adapter for Europe only) - 1x mini-in 4 pin connector for S-Video - 1x Composite - 1x USB port (for service upgrade and remote mouse function) - 1x Audio In Phone Jack (Mini Jack 3.5mm)

1-2 Compatible Mode

Analog

Compatibility	Resolution	V-Sync [Hz]
VGA	640x480	60
	640x480	72
	640x480	75
	640x480	85
	720x400	70
	720x400	85

Compatibility	Resolution	V-Sync [Hz]
SVGA	800x600	56
	800x600	60
	800x600	72
	800x600	75
	800x600	85
	832x624	72
XGA	1024x768	60
	1024x768	70
	1024x768	75
	1024x768	85
	1152x864	60
	1152x864	70
	1152x864	75
	1152x864	85
WXGA	1280x720	50
	1280x720	60
	1280x768	60
	1280x800	60
SXGA	1280x1024	60
	1280x1024	75
	1280x1024	85
SXGA+	1400x1050	60
UXGA	1600x1200	60
MAC LC 13	640x480	66.66
MAC II 13	640x480	66.68
MAC 19	1024x768	75
MAC	1152x870	75.06
MAC G4	640x480	60
i MAC DV	1024x768	75
	1152x870	75
	1280x960	75

Disassembly Process

2-1 Equipment Needed & Product Overview

1. Screw Bit (+) :105
2. Screw Bit (+) :107
3. Screw Bit (-) :107
4. Hex Sleeves 5 mm
5. Tweezers
6. EP726 projector

** Before you start: This process is protective level II. Operators should wear electrostatic chains.*

** Note: -If you need to replace the main board, you have to get into service mode and record the lamp usage hour.*

-The disassembly process for EP720 Family/EP726 Family is the same. Here, we take EP726 as an example.



2-2 Disassemble Lamp Cover

1. Unscrew 2 screws to disassemble the lamp cover.



2-3 Disassemble Lamp Module

1. Unscrew 2 screws then pull out the lamp module.

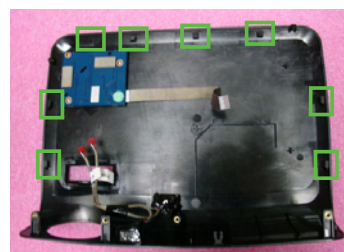
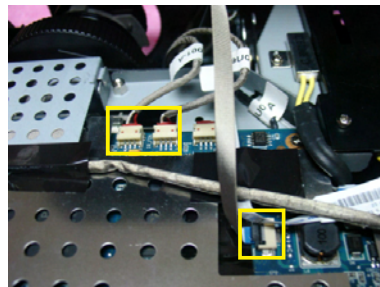
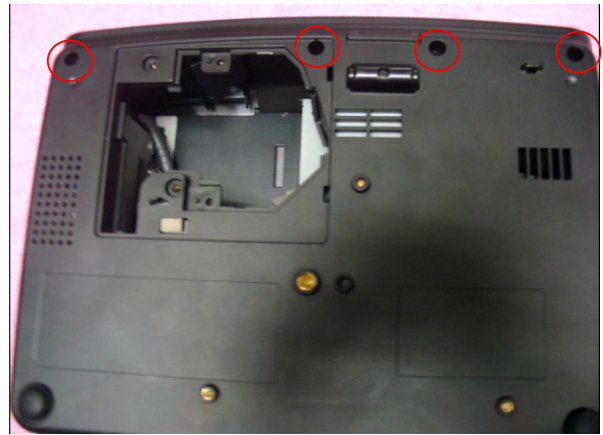


2-4 Disassemble Top Cover Module

1. Unscrew 7 screws(4 screws on the projector base and 3 screws on the besides)and 3 connectors.

Note: - Push the Top Cover(as the red arrow) then pull up it.Because there are 8 tenons on it.

- Avoid damage by pulling and dragging IR cable and keypad FPC cable.
- Hold the CNNT plug when pulling the FPC cable is strongly recommended. Pulling the cable directly from the projector will cause the cable damages.
- Make sure cables are plug in the correct ports when assembling the projector.

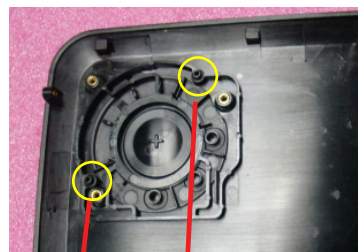
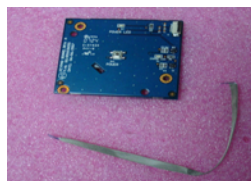
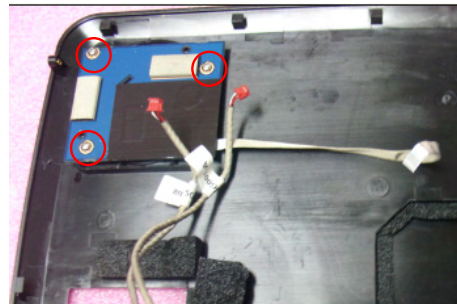


2-5 Disassemble Keypad Board and Keypad

1. Unscrew 3 screws and unplug 1 FPC Cable to disassemble the Keypad Board.
2. Separate the Keypad from the Top Cover.

Note: - Take care the two tenons when separating the Keypad.

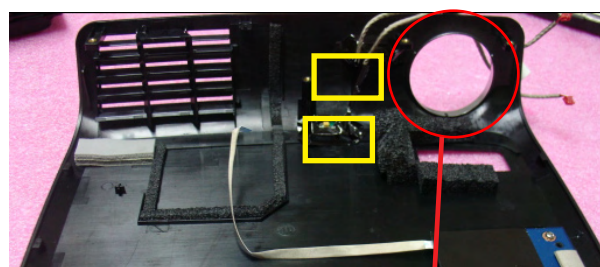
- Make sure cables plug into the correct ports when assembling the projector.



2-6 Disassemble IR Sensor and Focus Ring Cover

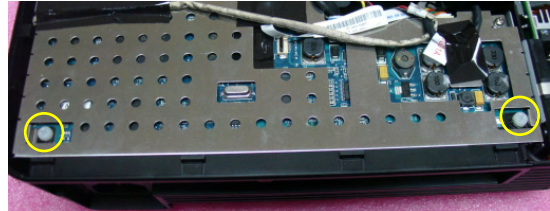
1. Use tweezers to take off the black film tape, then press two tenons to disassemble the IR Sensor. The other disassemble way is the same as above.
2. Separate Focus Ring Cover from Top Cover.

Note: - When you disassemble the IR Sensor, you should use two fingers to parallel pull out the hook.



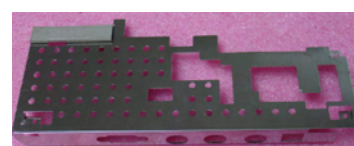
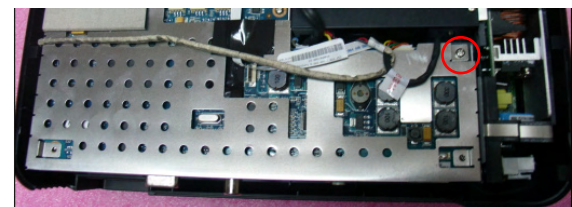
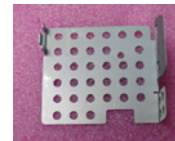
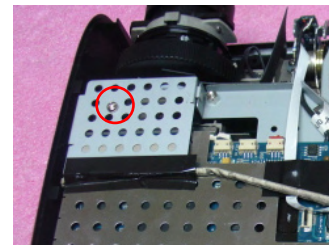
2-7 Disassemble I/O Cover

1. Unscrew 2 hex screws (on the Rear Cover).
2. Unscrew 2 screws (on the Top Shielding).



2-8 Disassemble Sheet Metal and Top Shielding

1. Unscrew 1 screw to disassemble Sheet Metal.
2. Unscrew 1 screw to disassemble Top Shielding.

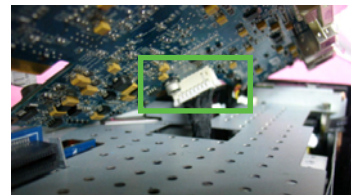
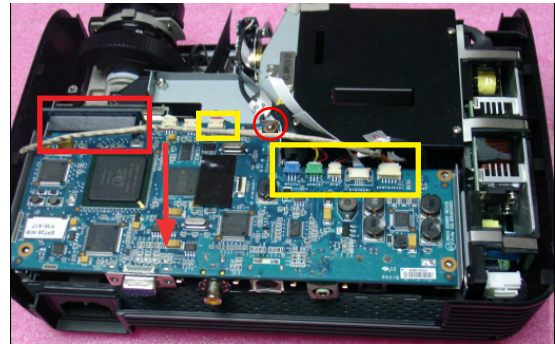


2-9 Disassemble Main Board

1. Unscrew 1 screw (as red circle).
2. Unplug 8 connectors.

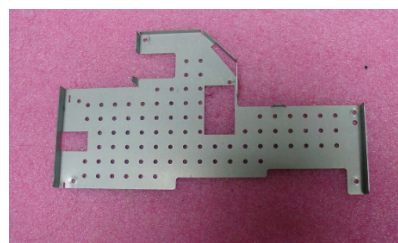
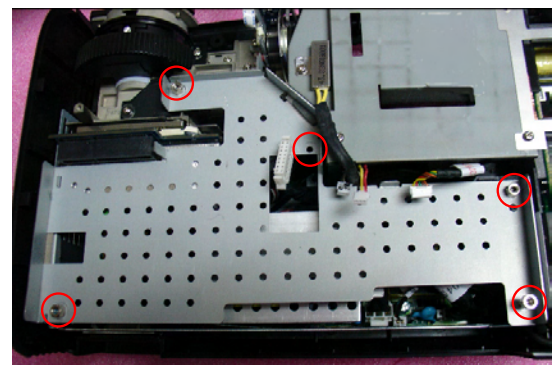
Note: - Unplug 6 connectors(as yellow squares), then push the Main Board as the red arrow,at last unplug the connector (as green square).

- Make sure cables plug into the correct ports when assembling the projector.



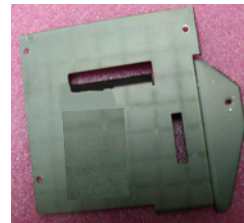
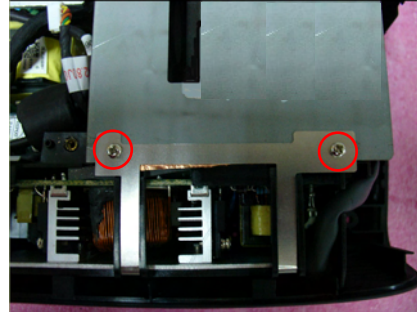
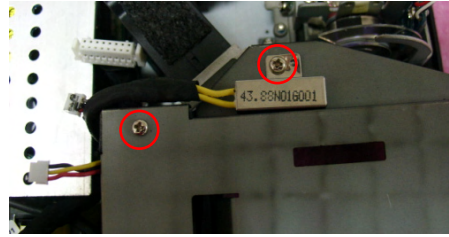
2-10 Disassemble Main Board Shielding

1. Unscrew 5 screws to disassemble Main Board Shielding.



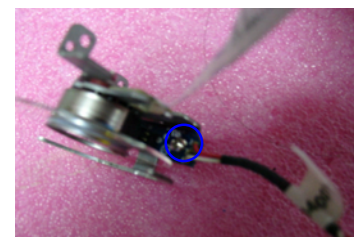
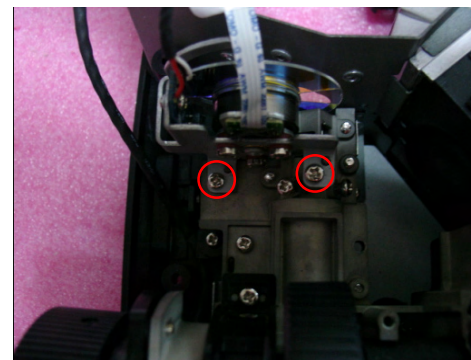
2-11 Disassemble Lamp House Shielding

1. Unscrew 4 screws to disassemble Lamp House Shielding.



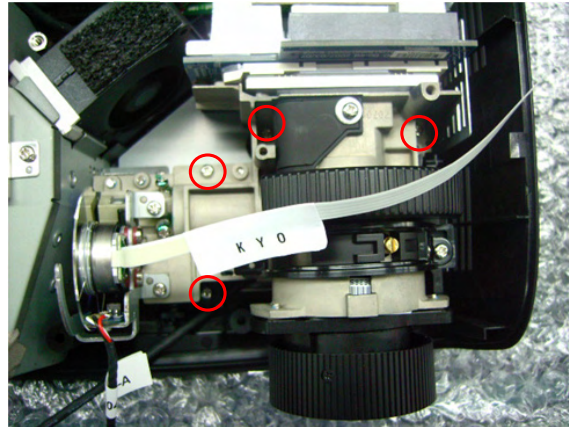
2-12 Disassemble Color Wheel and Photo Sensor Board

1. Unscrew 2 screws (as red circle) to disassemble Color Wheel Module.
2. Unscrew 1 screw from Color Wheel Module (as blue circle) and take out the Photo Sensor Board.



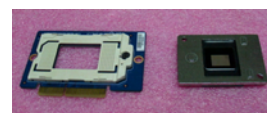
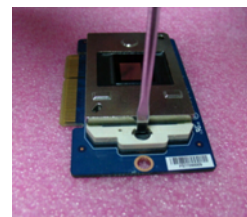
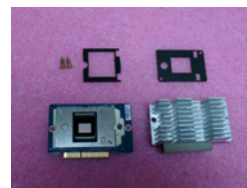
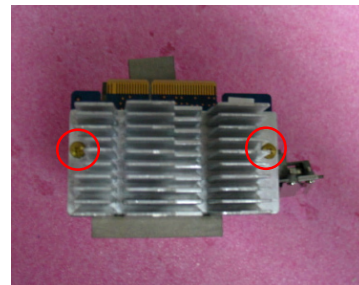
2-13 Disassemble Engine Module

1. Unscrew 4 screws to disassemble Engine Module.



2-14 Disassemble DMD Board and DMD Chip

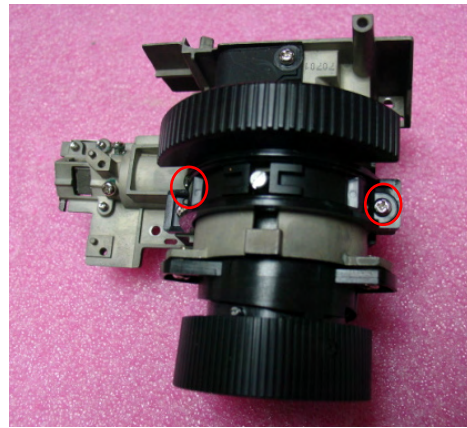
1. Unscrew 2 screws to disassemble DMD Module and Heat Sink.
2. Unlock the lockhole by Screw Bit (-) to disassemble the DMD Chip from the DMD Board.



Note: - Avoid damage by touching the DMD Chip.

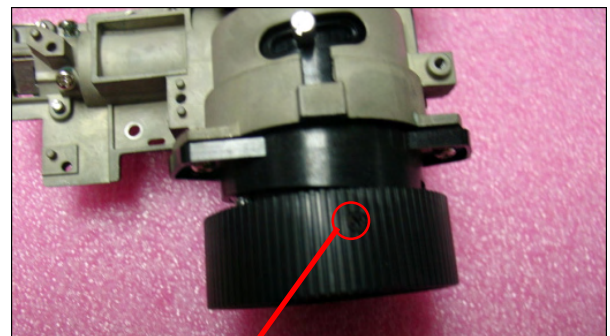
2-15 Disassemble Zoom Ring

1. Unscrew 2 screws to disassemble Zoom Ring.



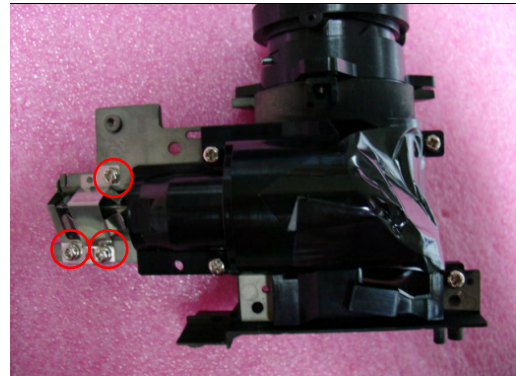
2-16 Disassemble Focus Ring

1. Unscrew 3 screws to disassemble Focus Ring.



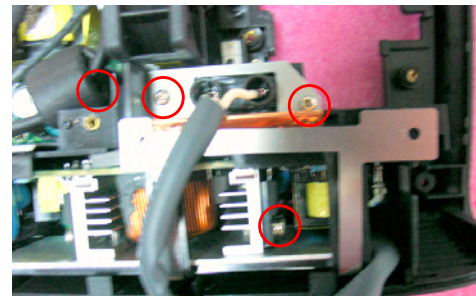
2-17 Disassemble Rod Module

1. Unscrew 3 screws to disassemble Rod Module.
2. Separate Rod Spring and Rod.



2-18 Disassemble Lamp Driver Module and Fan

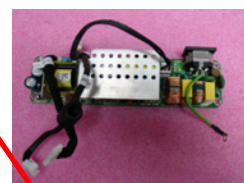
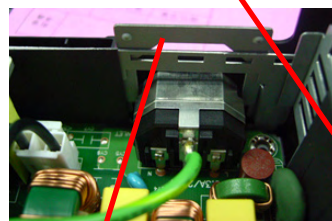
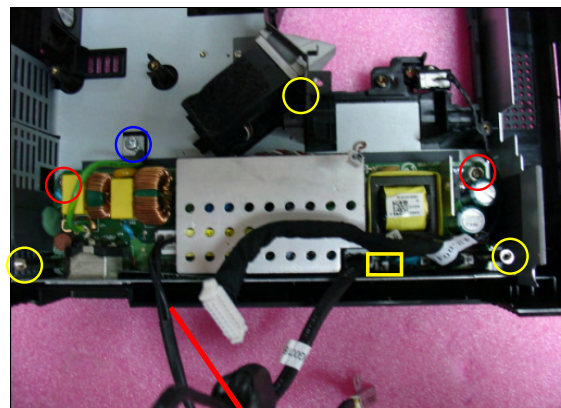
1. Unscrew 4 screws(as red circle) and 1 connector(as blue circle) to take out the Lamp Driver from Bottom Cover.
2. Separate the Lamp Driver and Lamp Driver Bracket.
3. Disassemble the Fan from system.



2-19 Disassemble LVPS Module

1. Unscrew 3 hex screws(as yellow circle) 2 screws(as red circle) and 1 screw (as blue circle).
2. Unplug 1 connector,disassemble LVPS Module.
3. Unplug 1 connector,disassemble Thermal Switch from LVPS Module.

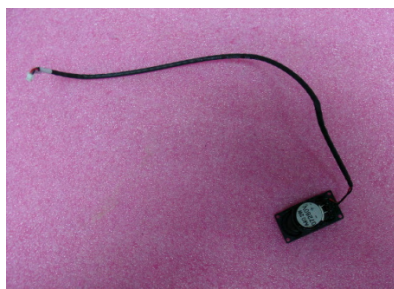
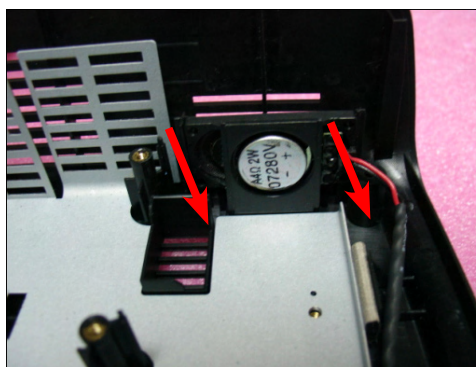
Note: - When you disassemble the Iron Cut, you should use tweezers to raise up it, then use two fingers pull it out the hook.



2-20 Disassemble Speaker

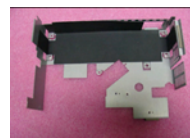
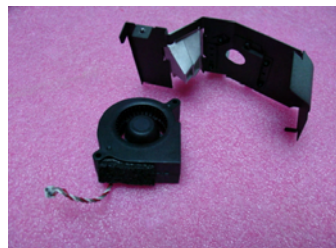
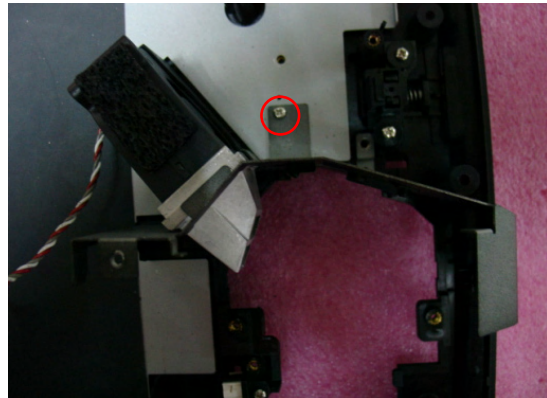
1. Separate the Speaker from the Bottom Cover.

- When you disassemble the speaker, you should use two fingers to pull the bracket as the red direction, then take out the speaker.



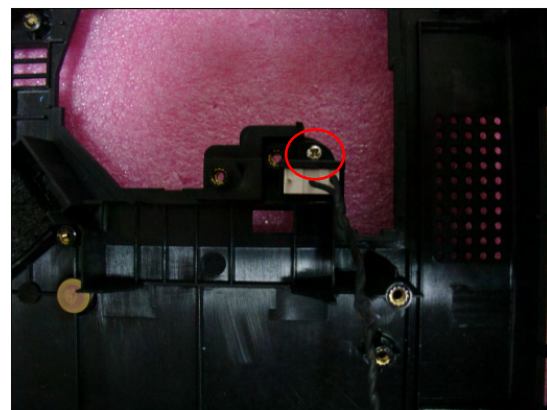
2-21 Disassemble Blower Module, Duct module and LVPS Sheetmetal module.

1. Unscrew 1 screw to disassemble Blower module and Duct Module.
2. Separate the Duct Module.
3. Take out the LVPS Sheetmetal Module.



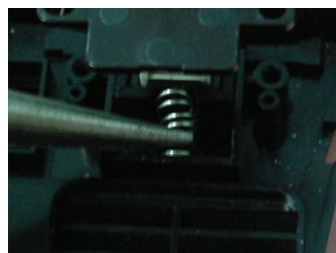
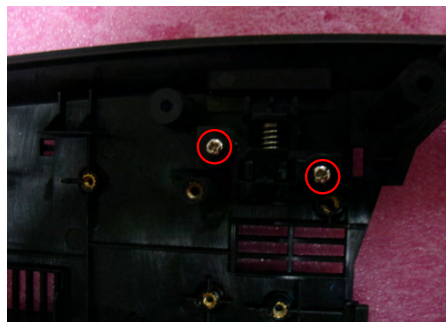
2-22 Disassemble Limit Switch

1. Unscrew 1 screw from the Bottom Base.



2-23 Disassemble Elevator

1. Unscrew 2 screws.
2. Use tweezers to take out the Short Spring.
3. Turn off the Bottom Cover to unscrew 1 screw.
4. Separate the rest Elevator Module.



2-24 Disassemble Adjust Foot

1. Unscrew 1 hex nut.
2. Turn off the Bottom Cover,unscrew Adjust Foot.



2-25 Rod Adjustment

1. Environment adjustment

- The distance between the engine and the screen is 2.38M.
- This process should be done at a dark environment. (under 5 Lux)

2. Procedure adjustment

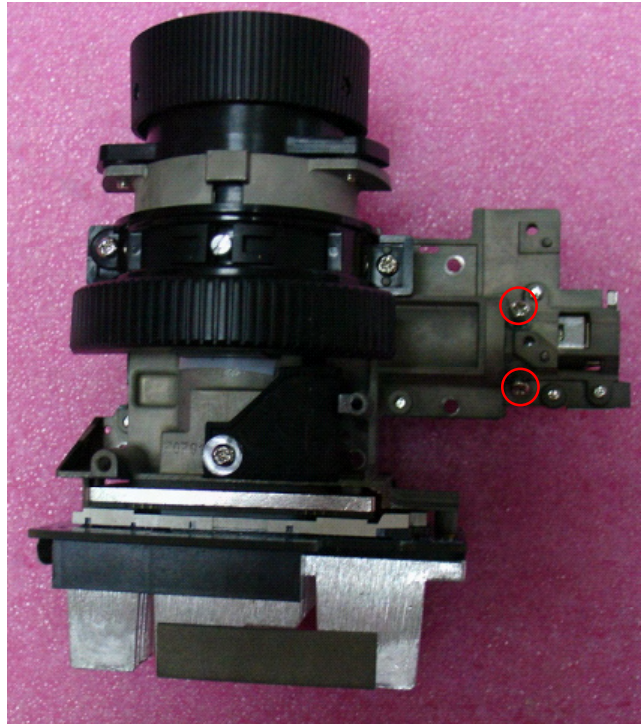
- Change the screen to "white screen."
- Adjust the screws by using the rod on the engine module to readjust the image. (adjust until the yellowish or bluish parts disappeared.)

3. Abnormal image inspection

- It should not have any abnormal color at the rim of the image by estimating through the eyes.

Note: - Avoid over adjusting the rod.

- After the operation, please use the glue to fix the screws.*



2-26 Re-write Lamp Usage Hours

Note: Please use remote control to do the follow action.

1. Get into service mode
 - Press (Power→Source→Source→Menu) to get into service mode.
2. Use “Source” or “Re-SYNG” key to re-write the lamp hour back to previous lamp usage hours.



3. Choose exit

Note: Source key = decrease lamp hour

Re-SYNG key=increase lamp hour



Troubleshooting

3-1 LED Lighting Message

Message	Power LED (Green)	Warning LED (Red)
Standby State (input power cord)	Flashing (1.0s on,1.0s off)	
Power on (Warming)	Flashing (0.5s on,0.5s off)	
Lamp strike retry		Flashing (0.5s on,0.5s off)
Error (Over Temp)		Flashing (1.0s on,1.0s off)
Error (Fan Fail)		Flashing (2.0s on,2.0s off)
Error (Lamp Fail)		

Note:Steady Light:  No Light: 

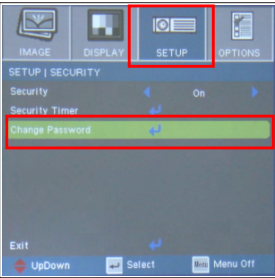
3-2 Main Procedure

No	Symptom	Procedure
1	No Power	- Ensure the Power Cord and AC Power Outlet are securely connected - Check Lamp Cover and Interrupt Switch - Ensure all connectors are securely connected and aren't broken - Check Lamp Driver - Check LVPS - Check Main Board
2	Auto Shut Down	- Check LED Status a. Power LED off, Warning LED red - Check Lamp - Check Lamp Driver - Check Main Board b. Power LED off, Warning LED flashing(1.0s on, 1.0s off) - Check Thermal Switch - Check Fan - Check Main Board c. Power LED off, Warning LED flashing(2.0s on, 2.0s off) - Check Fan - Check Main Board

No	Symptom	Procedure
3	No Image	- Ensure the Signal Cable and Source work (If you connect multiple sources at the same time, use the “Source” button on the control panel to switch) - Ensure all connectors are securely connected and aren’t broken - Check Main Board - Check DMD Board - Check Color Wheel - Check DMD Chip - Check Engine Module
4	No Light On	- Ensure all connectors are securely connected and aren’t broken - Check Lamp Module - Check Lamp Driver - Check LVPS - Check Main Board
5	Machanical Noise	- Check Color Wheel - Check Fan Module
6	Line Bar/Line Defect	- Check if the Main Board and the DMD Board are assembled properly - Check Main Board - Check DMD Board - Check DMD Chip
7	Image Flicker	- Do “Reset(All data)” of the OSD Menu - Ensure that the signal cables and source are work as well - Check Lamp Module - Check Color Wheel - Check DMD Board - Check Main Board

No	Symptom	Procedure
8	Color Abnormal	- Do "Reset(All data)" of the OSD Menu - Adjust Color Wheel Index - Check Main Board - Check DMD Board - Check Color Wheel
9	Poor Uniformity/ Shadow	- Ensure the projection screen without dirt - Ensure the projection lens is clean - Ensure the Brightness is within spec - Check rod alignment - Check Engine Module
10	Dead Pixel/Dust (Out of spec.)	- Ensure the projection screen without dirt - Ensure the projection lens is clean - Clean DMD Chip and Engine Module - Check DMD Chip - Check Engine Module
11	Garbage Image	- Ensure that the signal cables and source work as well. - Check Main Board - Check DMD Board
12	Remote Control/ Control Panel Failed	- Remote Control - a.Check Battery - b.Check Remote Controller - c.IR receiver - d.Check Main Board - Control Panel - a.Check FPC - b.Check keypad - c.Check Main Board
13	Function Abnormal	- Do "Reset(All data)" of the OSD Menu - Check Main Board - Check DMD Board

No	Symptom	Procedure
14	Forgetting Password	When the Password Protect is on, you must enter the password before you can turn on the projector. If you forget the password, the Universal Password will enable you start the projector up and reset the password. - Universal Password is printed on the Security Card. It is the password of Administrator. It can be accepted by projector anytime no matter what the projector's password is. - The Universal Password of EP720 is 2468. (As the Universal Password of EP720 Family&EP726 Family is the same, here we take EP720 for example.) Turn on the projector, the message "Enter Security Code" will appear. Please Input the "Current Security Code 2468" by Remote Control, then press "Enter". 

No	Symptom	Procedure
14	Forgetting Password	- Select "Setup", then select "Change Password", and press "Enter" button.  - The message "Enter New Security Code" appears. Input a 4-digit code (letters and/or numbers) that you define.  - To confirm, enter the password again. The "Security Code change successfully" appear on the screen.

Function Test & Alignment Procedure

4-1 Test Equipment Needed

- IBM PC with XGA resolution
- DVD player with Multi-system, equipped "Component", "S-Video" , "Composite" and "HDMI."
- HDTV Source (480P, 720P, 1080i)
- Minolta CL-100
- Quantum Data 802B or CHROMA2327 (Color Video Signal & Pattern Generator)
- After changing parts, check the information below.

4-2 Service Mode

1. Turn on the projector
2. Use Remote control to do the following actions to get into Service Mode.
 - (1) Press "Power"(as yellow circle), "Source"(as red circle), "Source" and "menu"(as blue circle) button sequentially.
 - (2) Service Mode will be shown.
 - (3) Choose "Exit" to leave the Service Mode.



4-3 OSD Reset

1. After final QC step, we have to erase all saved change again and restore the OSD default setting. The following actions will allow you to erase all end-users' settings and restore the default setting:
 - (1) Please get into OSD menu.
 - (2) To execute "Reset" function.

4-4 Test Condition

- Circumstance brightness: Dark room less than 5.0 lux.
- Inspection distance: 1.8m~2.5m functional inspection.
- Screen size: 60 inches diagonal.
- After repairing, every unit should be run-in (refer to the table below).

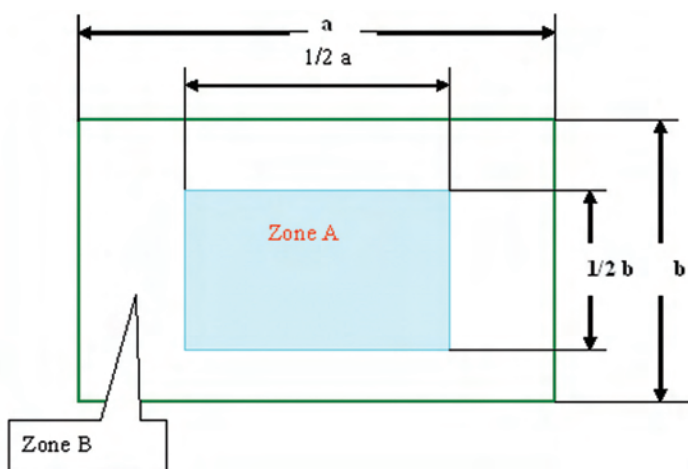
Symptom	Run-in Time
Normal repair	2 hours
NFF	4 hours
Auto shutdown	6 hours

- Get into Burn-In Mode

* Cycle setting is based on the defect symptoms. ie: If it is NFF, the run-in time is 4 hours. You have to set the lamp on for 50 min. and lamp off for 10 min for 4 cycles.

Press power > Source > Source > Menu	
Choose Burn-In Test > enter	
Lamp On (Min)	Press right key to adjust the time (50)
Lamp Off (Min)	Press right key to adjust the time (10)
Set burn in cycle	Press right key to adjust the cycle
After setting up the time, choose Burn-In mode and hit enter	

Screen Defects (While replacing DMD Chip, DMD BD and MB)



< Figure: Zone A & B Definition >

Defect specification table

Order	Symptom	Pattern	Criteria
1	Bright pixel (dots)	Black pattern (IRE=0)	A+B=0
2	Dark pixel(dots)	White pattern	A+B≤3
3	Unstable pixel (dots)	White & Black pattern	A+B≤1
4	Adjacent dark pixel (dots)	White & Black pattern	A+B=0
5	Dark blemish (Dirty)	Blue 60 pattern	A+B≤4 (diameter <1/2 inch)
6	Bright blemish (Dirty)	Gray 30 pattern	A+B≤4 (diameter <1/2 inch)
7	Bright dot on frame	Black pattern	1

4-5 Test Inspection Procedure

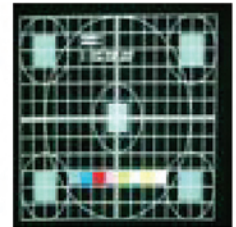
Charge parts Update	M/B	FW	Color Wheel	Lamp Module	Engine Module
Version Update	v	v			
Color Wheel Index	v		v		
Reset lamp hour				v	
OSD Reset	v	v			
EDID	v				
Re-write Lamp Hour Usage	v				
Rod Adjustment					v

Note: If color appears abnormal after M/B is changed, please do color wheel index adjustment.

4-6 PC MODE

1. Frequency and tracking boundry

Procedure	- Test equipment: video generator. - Test signal: analog 800 x 600@60Hz(EP720 Family) 1024x768@60Hz(EP726 Family) - Test Pattern: general-1 or master - Check and see if the image sharpness is well-performed. - If not re-adjust by the following steps: (1) Select "Frequency" function to adjust the total pixel number of pixel clock in one line period. (2) Select "Tracking" function and use right or left arrow key to adjust the value to minimize video flicker. - Adjust Resync or Frequency/Tracking/H. Position/V. Position to the inner screen.
Inspection item	- Eliminate visual wavy noise by Rsync, Frequency or Tracking selection. - Check if there is noise on the screen. - Horizontal and vertical position of the vedio should be adjustable to the screen frame.
Criteria	- If there is noise on the screen, the product is considered as failure product. - If there is noise on the screen, use auto or manual "frequency" function or "tracking" function to adjust the screen. - Make sure the PC mode functionas well, including that frequency and auto detected function are workable.



General-1



Master

2. Light Leak

Procedure	- Test equipment: video generator. - Test signal: analog 800 x 600@60Hz(EP720
-----------	---

Family)
1024x768@60Hz(EP726
Family)

- Test Pattern: gray 10 patterns
- Check if the light leaks.
 - * Light leak may exist on reflective edge, eye-catcher, bondwires and exposed metal.



Gray 10

Inspection item

- Light leak check.

Criteria

- Bright blemish (dirty).
- The pattern cannot accept the color level of the leakage is brighter than the gray 10 pattern.

3. Blemish (Dark)

Procedure

- Test equipment: video generator.
- Test signal: analog 800 x 600@60Hz(EP720
Family)
1024x768@60Hz(EP726
Family)
- Test Pattern: blue 60



Blue 60

Inspection item

- Dark blemish check.(dirty)

Criteria

- The dark blemish is unacceptable in zone A.
The number of dark blemish is less or equal to 4 in zone B.

4. Blemish (Bright)

Procedure

- Test equipment: video generator.
- Test signal: analog 800 x 600@60Hz(EP720
Family)
1024x768@60Hz(EP726
Family)



Gray 30

Inspection item

- Bright blemish check.(dirty)

Criteria

- The number of bright blemish is less or equal to 4 under gray 30 pattern.

5. Dead Pixel (Bright pixel)

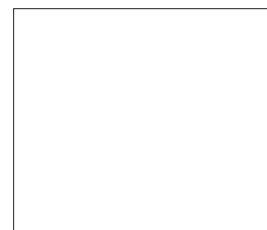
Procedure	- Test equipment: video generator. - Test signal: analog 800 x 600@60Hz(EP720 Family) 1024x768@60Hz(EP726 Family) - Test Pattern: full black
Inspection item	- Bright pixel check.
Criteria	- Bright pixel is unacceptable except that 1 is allowed on frame edge.



Full black

6. Dead Pixel (Dark pixel)

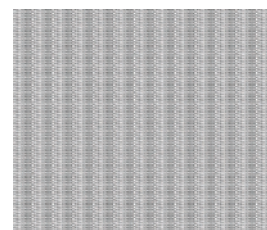
Procedure	- Test equipment: video generator. - Test signal: analog 800 x 600@60Hz(EP720 Family) 1024x768@60Hz(EP726 Family) - Test Pattern: full white
Inspection item	- Dead pixels check. - White pattern (IRE=100) - Adjacent dark pixel.
Criteria	- The number of the dead pixels should be less or equal to 3. - Adjacent pixel with each other is unacceptable.



Full white

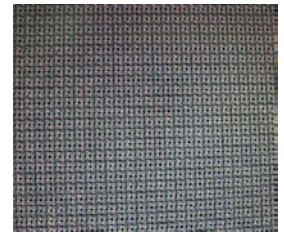
7. Focus test

Procedure	- Test equipment: video generator. - Test signal: analog 800 x 600@60Hz(EP720 Family) 1024x768@60Hz(EP726 Family) - Test Pattern: full screen or MEME Sony
Inspection item	- Focus check
Criteria	- From screen 1.5 M via visual to check the focus,



Full screen

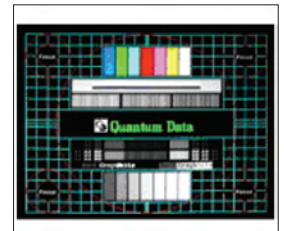
look at the entire screen, focus shall be clear, crisp, and sharp over the entire surface of the display pattern. (Blue word on one of the corner after adjustment is acceptable. However, the word should at least be recognizable.)



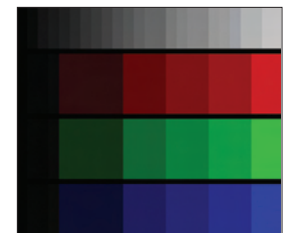
MEME Sony

8. Color performance

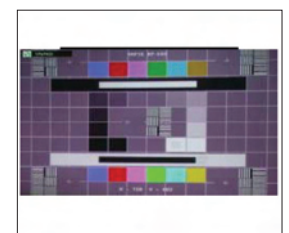
Procedure	- Test equipment: video generator. - Test signal: 720p, 1080i - Test Pattern: Master, In focus II or SMPTE RP-133 * Please refer to 4-2 to enter service mode. - Use 720P & 1080i signal, master pattern to do HDTV test. Color cannot discolor to purple and blue.
Inspection item	- Check if each color level is well-functioned. - Color saturations
Criteria	- Screen appears normal. It should not have any abnormal condition, such as lines appear on the screen and so on. - Color appears normal. - It is acceptable to have few lines flashing at the center and on the edge of 1080i image. However, rest of the image should appears stable. - RGBW should all appear normal on the screen and sort from R -G-B-W. - Color levels should be sufficient and normal. (the unidentified color levels on both left and right sides should not over 8 color levels.) - Gray level should not have abnormal color or heavy lines. - Make sure the PC mode functionas well, including that frequency and auto detected function are workable.



Master



*InFocus II
/ 64 gray RGBW*



SMPTE RP-133

4-7 Video Performance

1. CVBS

Procedure	- Test equipment: DVD player - Test signal: CVBS
Inspection item	- Video performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check any abnormal color, line distortion or any noise on the screen. - Check the sound from speakers.



Motion video

2. S-Video

Procedure	- Test equipment: DVD player - Test signal: S-Video
Inspection item	- Video performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check any abnormal color, line distortion or any noise on the screen. - Check the sound from speakers.

3. HDTV/ Component

Procedure	- Test equipment: DVD player - Test signal: YCbCr/YPbPr
Inspection item	- HDTV performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check any abnormal color, line distortion or any noise on the screen. - Check the sound from speakers.

4. Audio Test

Procedure	- Test equipment: DVD player - Test signal: CVBS
-----------	--

Inspection item	- Audio performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check the sound from speakers - Check "Volume" is normal - Check "Mute" is normal

4-8 Optical Performance Measure

Inspection Condition
- Environment luminance: 5 Lux - Product must be warmed up for 3 minutes - Distances from the screen: 2.38 M - Screen Size: 60 inches diagonal - Reset to default before measurement

1. Test equipment

Procedure	- Test equipment: video generator. - Test signal: analog 800 x 600@60Hz(EP720 Family) 1024x768@60Hz(EP726 Family)
-----------	--

2. Brightness

Procedure	- Full white pattern - Use CL100 to measure brightness values of P1~P9. - Follow the brightness formula to calculate brightness values. ☀ Brightness Formula Avg. (P1~P9)*1.1m²
Criteria	- 880 lumen

3. Ful On/Full Off Contrast

- Procedure
- Full white pattern & full black pattern

- Use CL100 to measure brightness values of full white pattern P5 & full black pattern B5 (see image: full white)

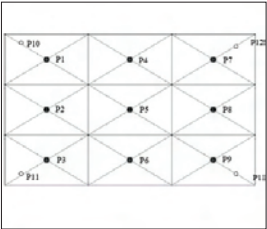
- Follow Contrast formula to calculate contrast values.

☀ Contrast Formula

P5/B5

note: P5=center of white image

B5 = the center of black image.



Full white pattern

- Criteria
- 1400:1



Full black pattern

4. Uniformity

- Procedure
- Full white pattern

- Use CL100 to measure brightness values of P1~P9 (see image: full white).

- Follow the Uniformity formula to calculate average values.

☀ Uniformity Formula

ANSI Uniformity = $\frac{\text{Avg. (P1, P3, P7, P9)}}{P5} \times 100\%$

- Criteria
- 65 %

4-9 Others

1. Functional Inspection

Keypad button	- All keypad buttons must operate smoothly.
General	- All OSD functions must be checked for functionality. When OSD menu is displayed, there shall be no visible peaking, ringing, streaking, or smearing artifacts on the screen.
Factory Default	- The factory settings (with appropriate centering, size, geometry distortion, etc.) shall be displayed upon "Recall" is selected from OSD
Display Size	- All preset modes shall expand to full screen size using OSD Horizontal and Vertical Size controls
Display Data Channel (DDC)	- The purpose of the DDC test is to verify the DDC1/DDC2B operation of the projector and to verify Plug & Play function.
Acoustic	- High pitch sound from cooling fan and color wheel is unacceptable.

2. Check points for exterior and print pattern

Check item	Check point
text & pattern	missing letters & pattern or blurry prints are unacceptable.
exterior	dirt, scrape, water ripples and uneven color are unacceptable.
buttons	stuck buttons are unacceptable.
Focus ring	Focus ring is functioning smoothly.
Logo	missing logo, missing prints and blurry prints are unacceptable
screw	All screw sure be fixed and in right type.
elevator	Elevator is well-functioned. Stuck key is unacceptable.
pedestal	well-functioned
lamp cover	It should be locked in the correct place.
Plastic parts	All plastic parts can not be brocken and damaged.
Safety or warning label	All safety and warning label should be visible, including all contents.
Connector	All interface connector should be complete and workable.

Firmware Upgrade

5-1 Equipment Needed

Software : (DDP 2230- USB)

- DLP Composer
- Firmware
- Library file (library file has to put in PC and set right path in 5-4 step 4)

Note: The FW upgrade procedure for EP720 Family&EP726 Family are the same. Here, we take EP726 as an example.

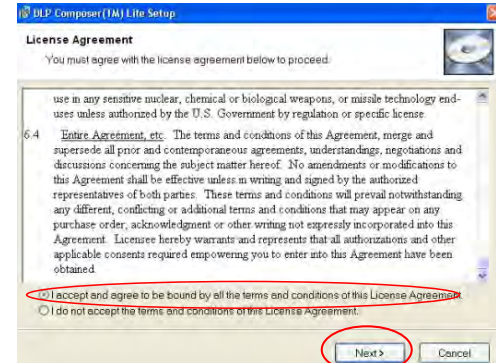
Hardware :

- Projector
- Power cord:42.50115G001
- USB Cable:42.00280G001
- PC or Laptop



5-2 DLP Composer Lite Setup Procedure

1. Choose "DLP Composer Lite V7.1 Setup" Program.
2. Click "Next" button
3. Read "License Agreement."
 - Choose "I accept and agree to be bound by all the terms and conditions of this License Agreement."
 - Click "Next" button.
4. Click "Next" button.

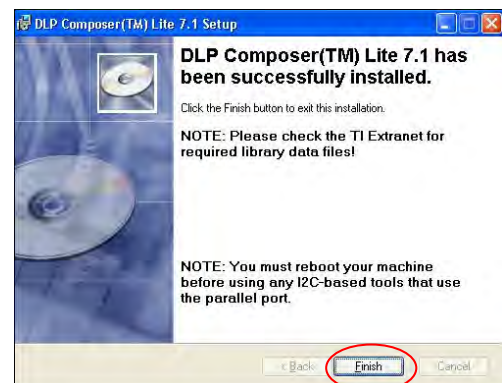
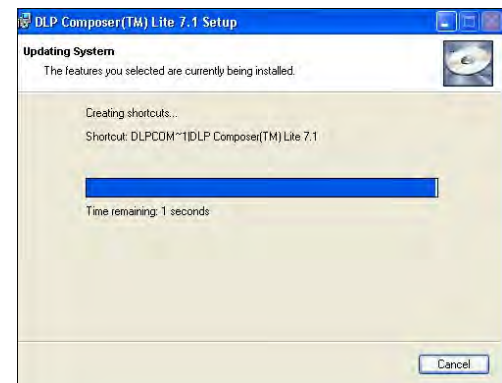
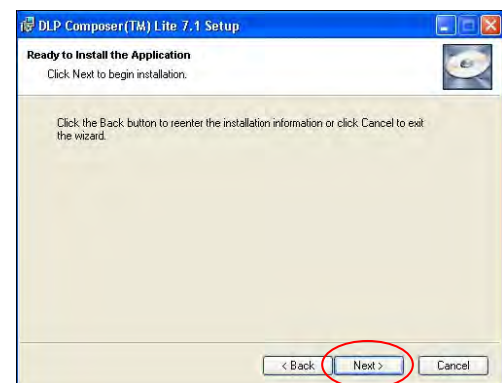
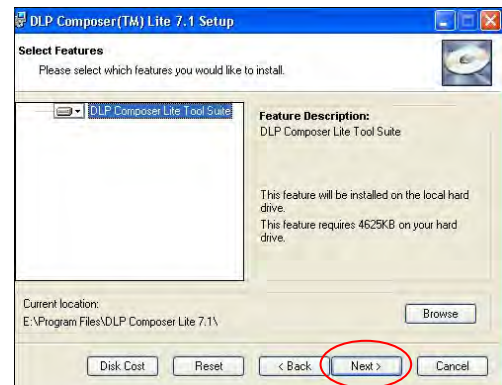


5. Click “Next” button.

6. Click “Next” button.

7. The program is executing "Initializing" status

8. Click “Finish.”



5-3 USB Driver Upgrade Procedure

1. set up

- Connect the Projector with PC by USB cable.
- It will show as the right picture.
- Select the item as red circle show.
- Click "Next" button.



2. Installation

- Click "Finish" and then the USB driver has been set up successfully.

Note: If you have installed the USB driver, there is no need to perform this action.



5-4 Firmware Upgrade Procedure

1. Set-up

- Hold on “power” button then plug in power cord and waiting for about 5 seconds.
- Once power, lamp and temp LED light up, plug in USB cable into the projector and link to the USB port of PC.

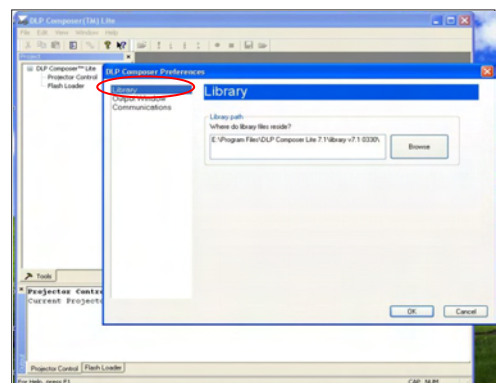
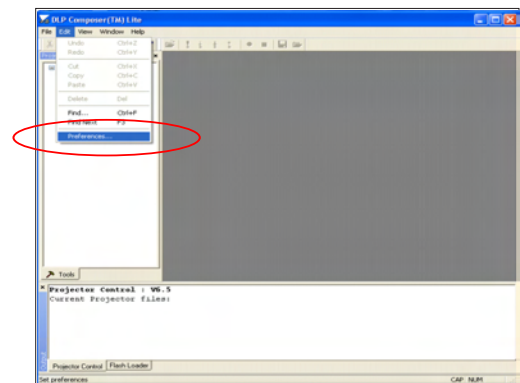
Note: The system fan and the light will not be operated.

2. Execute the “DLP Composer™” file.

3. Click “edit” and “perferences.”

4. Click “Library.”

- Click the "browse" button and navigate to the directory where you put the DLP Composer installation files in.



5. Select “Edit\preferences\Communications”

- Choose “USB.”
- Click “OK.”

6. Choose “Flash Loader.”

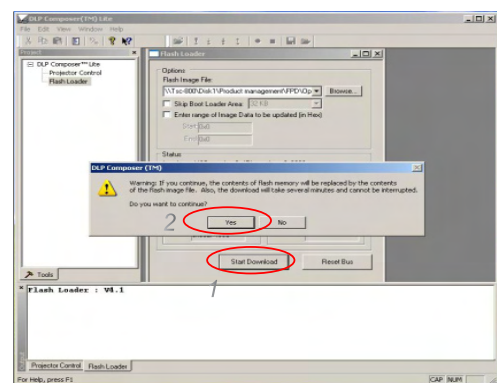
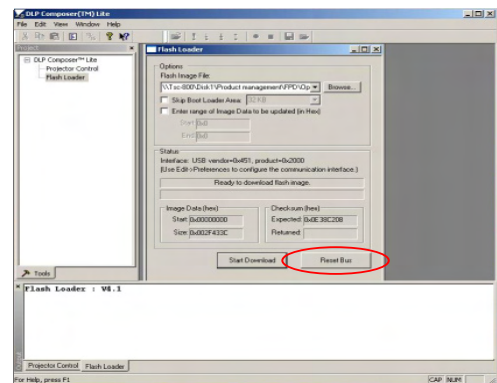
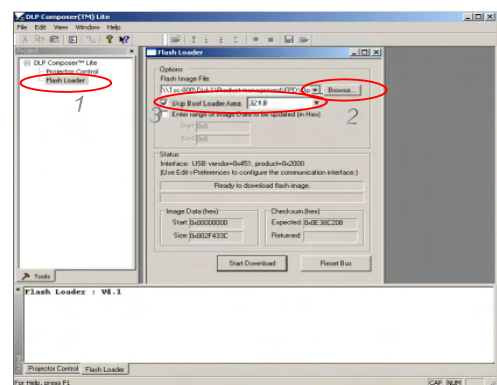
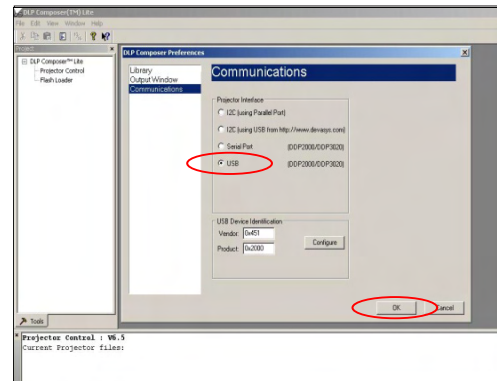
- Click “Browse” to search the firmware file.
- Select “Skip Boot Loader Area” to 32KB.

7. Click “Reset Bus” to erase the flash memory.

Note: If the error message “cannot open USB driver - No projectors found” appears, please unplug the USB Cable and replug, then check Driver. Finally, Repeat procedure 7. Click “Reset Bus” to erase the flash memory.

8. If the firmware is ready, click “start download” to process the firmware upgrade.

- Click “Yes” to erase the flash memory.



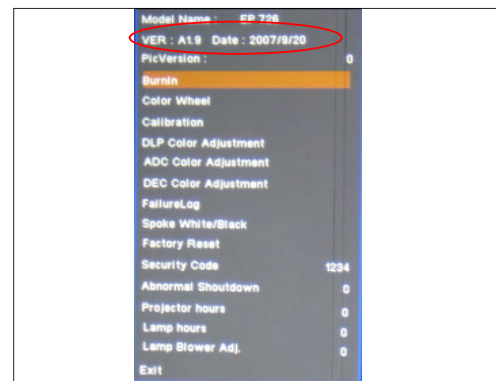
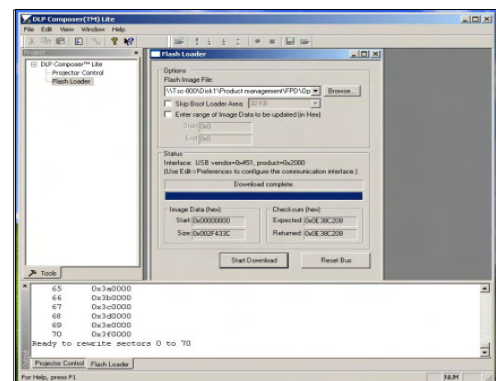
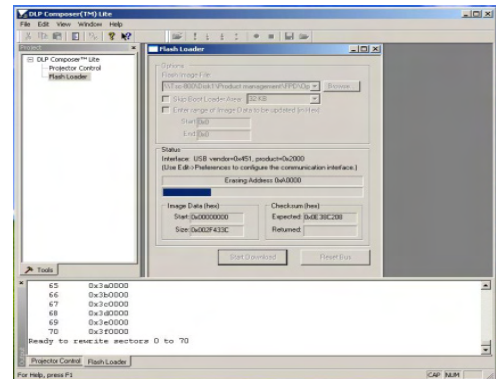
9. Proceeding Picture.

10. When firmware upgrade process is finished, the unit return to stand-by status. The LED power lights on and appears blue.

- Unplug USB cable and power cord and replug in power cable.

11. Restart the unit and get into the Service mode to check the firmware version.

(To get into Service Mode, please refer to Chapter 4 Function Test and Alignment Procedure.)



EDID Upgrade

6-1 EDID Introduction

Extended Display Identification Data is a VESA standard data format that contains basic information about a display device and its capabilities, including vendor information, maximum image size, color characteristics, factory pre-set timings, frequency range limits, and character strings for the monitor name and serial number.

The information is stored in the display and is used to communicate with the system through a Display Data Channel (DDC), which sits between the display device and the PC graphics adapter. The system uses this information for configuration purposes, so the monitor and system can work together.

6-2 Equipment Needed

Software

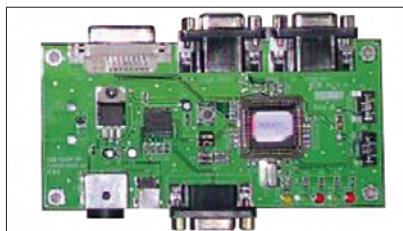
- EDID Program (Generic V0.51)
- EDID File *.ini

Hardware

- Projector
- Generic Fixture :80.00001.001 for EDID Key-in (Fixture: JP3 must be closed)
- Power cord
- RS-232 Cable (pin to pin, F-M):42.83618G001
- Monitor
- PC
- VGA cable:42.87305G001
- Power adapter for fixture :47.57702G001

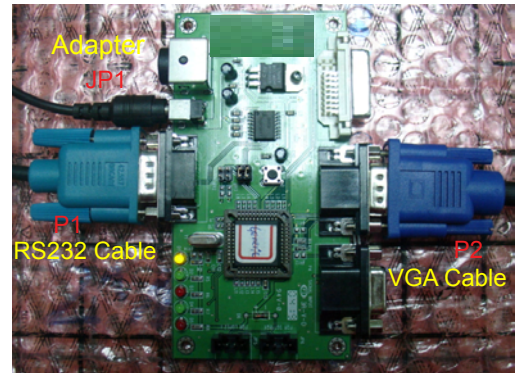
Note: The EDID upgrade procedure for EP720 Family/EP726 Family are the same.

Here, we take EP726 as an example.



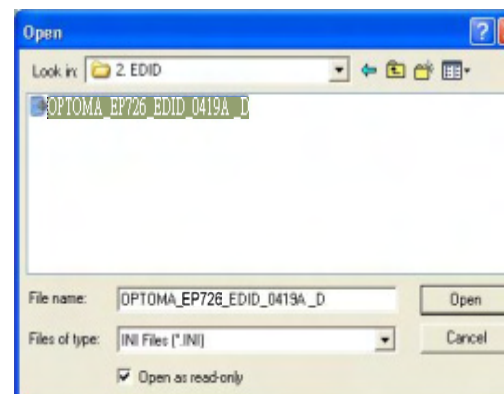
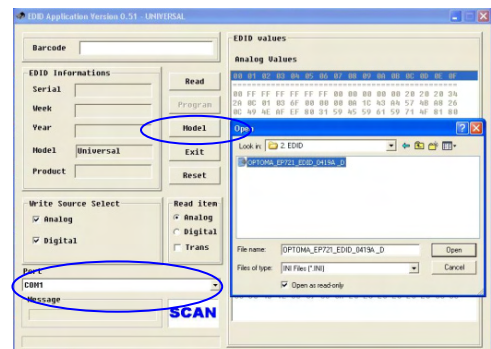
6-3 Setup Procedure

1. Connect all ports
 - Power adapter to fixture JP1
 - Fixture P1 to PC COM1 Port
 - Fixture P2 to Projector analog port
 - Power on fixture



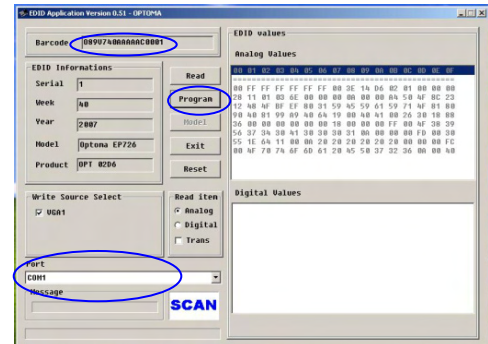
6-4 EDID Key-In Procedure

1. Click on "EDID" to execute EDID program
2. Choose model
 - In the port selection bar, please choose the port that you use. Example: if you use "COM1," choose COM1 in the port selection.
 - Click "Model."
 - Choose the EDID that responds to the model that you choose.



3. Programming

- Key in the serial number into the barcode blank space.
- In "Write Source Select," make a check in "VGA1".
- Click "Program."



4. Change the cable to VGA1

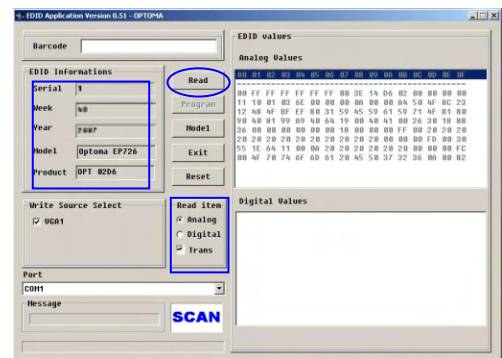
- Message box appears on the screen, then click "OK."



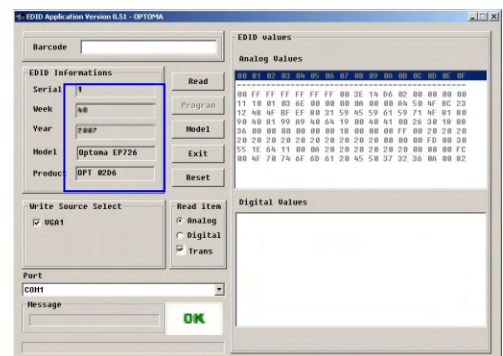
- 5. When the EDID program is completed, a message "OK" will appear on the screen.

6. Read EDID "Analog" information

- In the Read item, select "Analog" and "Trans", then click the "Read" button.

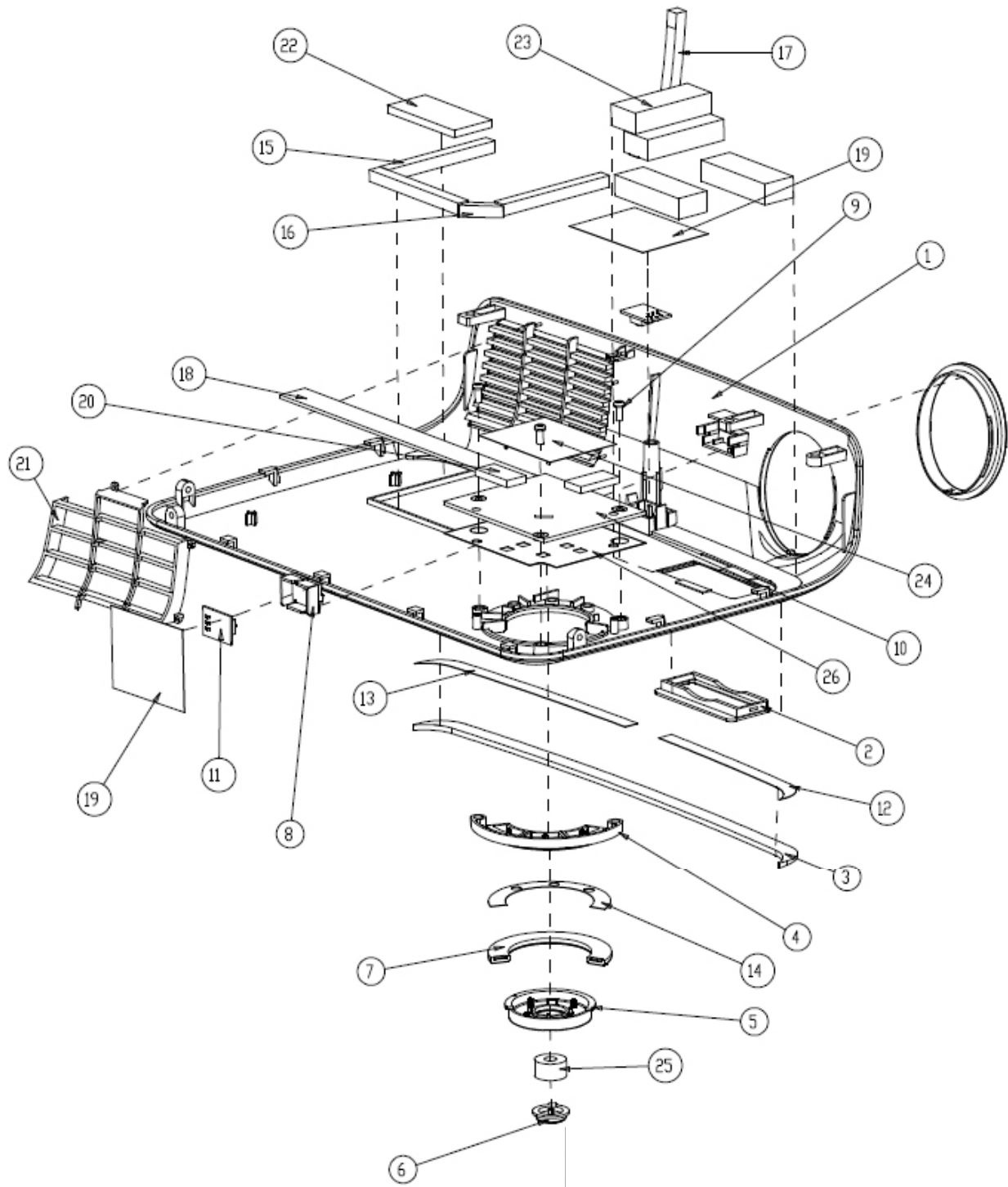


7. EDID Informations will appear



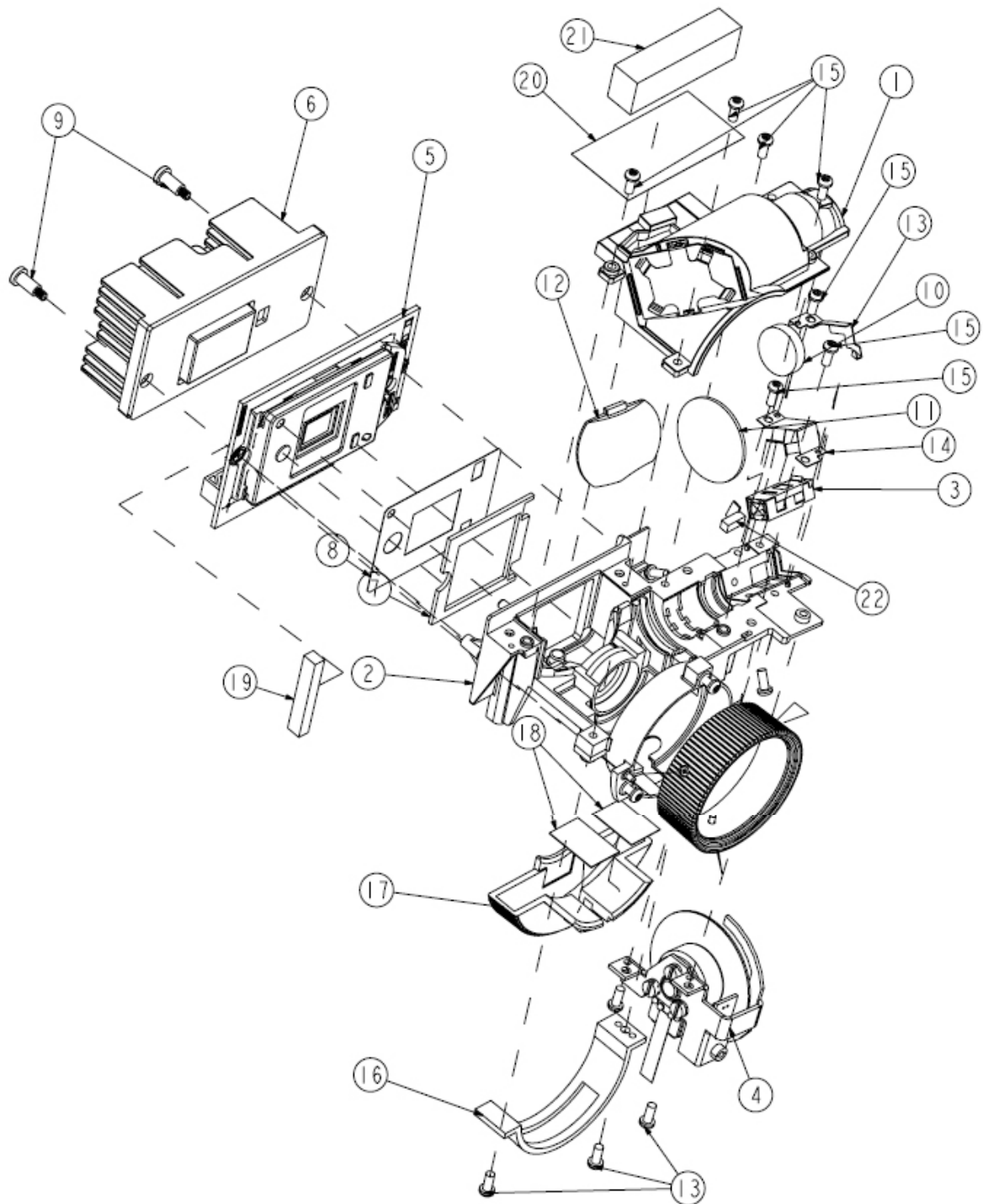
Appendix A

Assy Top case Module EP720/EP726



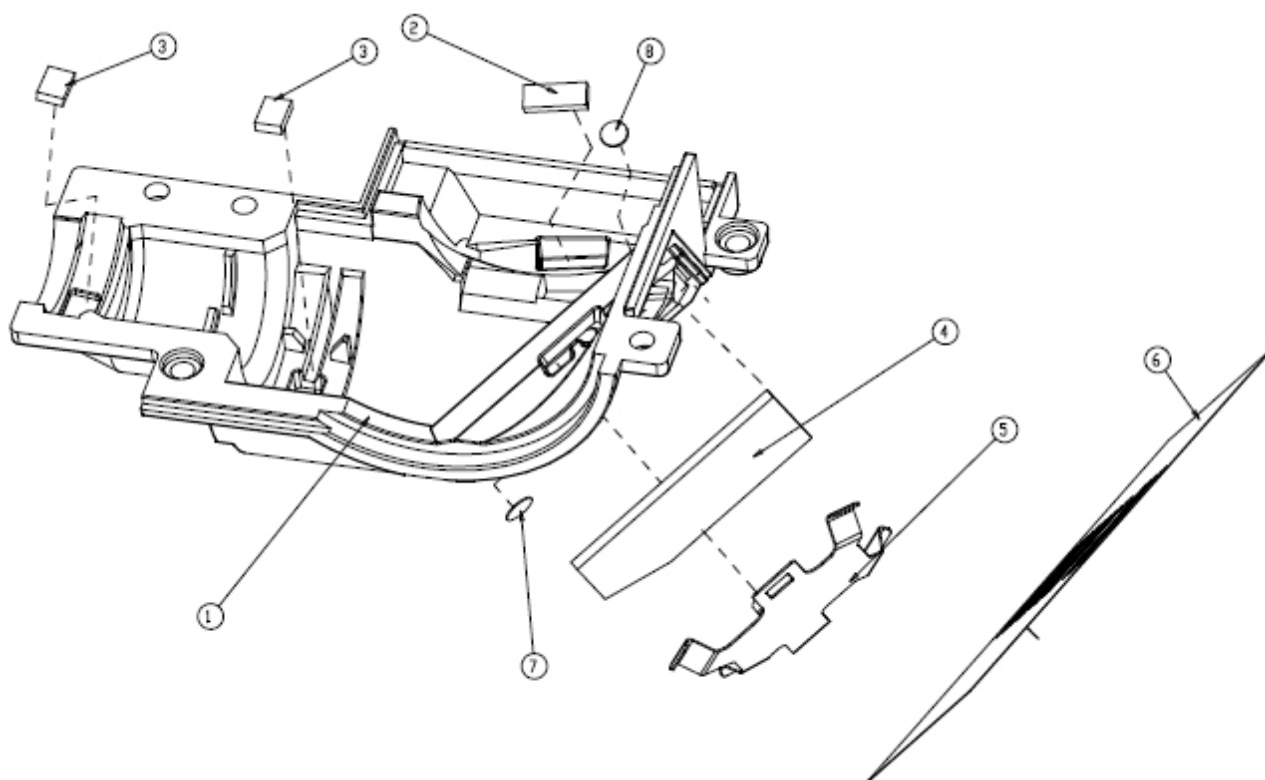
item	P/N	Rev	Description	Parts Supply
1	51.88N06G031	A	TOP CASE PC LN-2520 EP720	
2	51.88N10G001	A	FOCUS RING COVER PC MN3600H,EP721	
3	51.88N13G001	A	TOP IR LENS PC,EP721	
4	51.88N16G001	A	KEYPAD PC MN3600H,EP721	
5	51.88N17G001	C	4 WAY KEY PC MN3600H,EP721	
6	51.88N18G001	A	ENTER KEY PC MN3600H,EP721	
7	51.88N19G001	A	LED LENS KEYPAD,PC,EP721	
8	51.88N26G001	A	FRONT IR LENS PC,EP721	
9	85.1A526G040	A	SCREW PAN MECH M2.6*4 Ni NYLOK	NO
10	80.89U03G001	B	PCBA KEYPAD BOARD FOR EP720	
11	80.89U05G001	A	PCBA IR BOARD FOR EP720	
12	51.88N30G002	A	ADHESIVE1 FOR TOP IR LENS NEW,EP721	
13	51.88N31G002	A	ADHESIVE2 FOR TOP IR LENS NEW,EP721	
14	51.88N32G001	A	ADHESIVE FOR LED LENS EP721	
15	52.88N15G001	A	SPONGE1 FOR TOP CASE EP721	NO
16	52.88N16G001	A	SPONGE2 FOR TOP CASE EP721	NO
17	52.88N17G001	A	SPONE3 FOR TOP CASE EP721	NO
18	42.0030EG001	A	FFC 8P P=0.5mm MAIN BOARD TO KEYPAD BOARD	
19	51.88N46G001	A	3M TAPY MYLAR EP721	NO
20	41.82G05G001	A	EMI GASKET W10*L20*H3mm EP719	NO
21	51.88N35G001	A	FRONT VENT NORYL V1050B EP721	NO
22	52.88N21G001	B	SPONGE F12 FOR TOP CASE EP721	NO
23	52.80N07G001	A	M/B ABSORPTION NOISE CVS 15*t10mm L40 HD70	NO
24	51.88N40G001	A	TAPE 3M J1350 FOR IR SENSOR BD 34*45mm EP721	NO
25	52.88N23G001	A	SPONGE FOR ENTER KEY EP721	NO
26	51.88N42G001	A	3M TAPE J1350 FOR KEYPAD BD EP721	NO

Assy Optical Engine



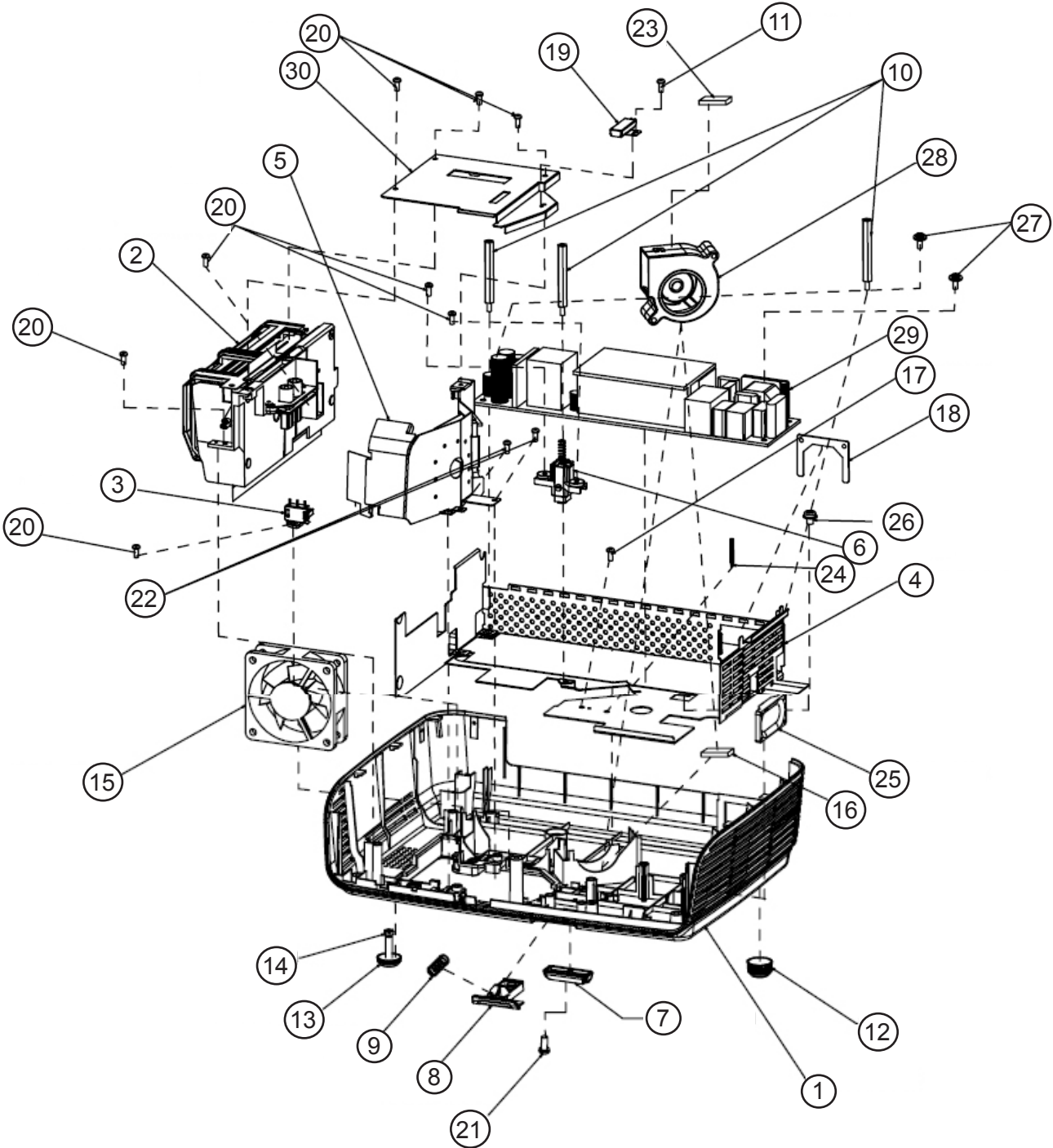
item	P/N	Rev	Description	Parts Supply
	70.88N20GR01	A	ASSY ENGINE MODULE EP721(RMA)	
1	70.89U04G001	A	ASSY ENGINE BOTTOM COVER EP720	NO
2	70.88N05G001	A	PRE-ASSY ENGINE BASE EP721	NO
3	70.89U06G001	A	ASSY ROD MODULE EP720	NO
10	23.88N20G001	A	YO CONDENSER1 FOR X15	NO
11	23.88N20G011	A	YO CONDENSER2 FOR X15	NO
12	23.88N06G001	A	YO PLASTIC RELAY FOR X15	NO
13	61.88N13G002	A	ROD COVER NEW SUS301 X15	NO
14	61.88N12G001	A	ROD SPRING SUS301,X15	NO
15	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
16	51.88N03G001	A	ZOOM RING HOLDER PC MN3600H,EP721	NO
17	51.88N05G001	A	ZOOM RING PC MN3600H,EP721	NO
18	51.82Y28G001	A	TEFLON ELEVATOR 12*18mm 0.25t DP715	NO
4	70.88N07G001	A	ASSY COLOR WHEEL MODULE EP721	NO
5	70.88N08G001	A	ASSY DMD MODULE EP721	NO
6	70.88N09G001	A	PRE-ASSY HEATSINK MODULE EP721	NO
7	52.88N04G001	A	DMD RUBBER,X15	NO
8	61.88N15G001	A	DMD MASK SUS301,X15	NO
9	85.4A826G118	A	STEP SCREW FOR TYPEX DMD M2.6*11.8mm,X15	NO
19	41.85W07G001	A	EMI GASKET W5*H4*L30	NO
20	41.82K19G001	A	EMI TAPE W25*L50mm	NO
21	41.82G10G001	A	EMI GASKET W10*L45*H13mm EP719	NO
22	61.88N39G001	A	STOP MASK MG X15	NO

Assy Engine Bottom Cover EP720/EP726



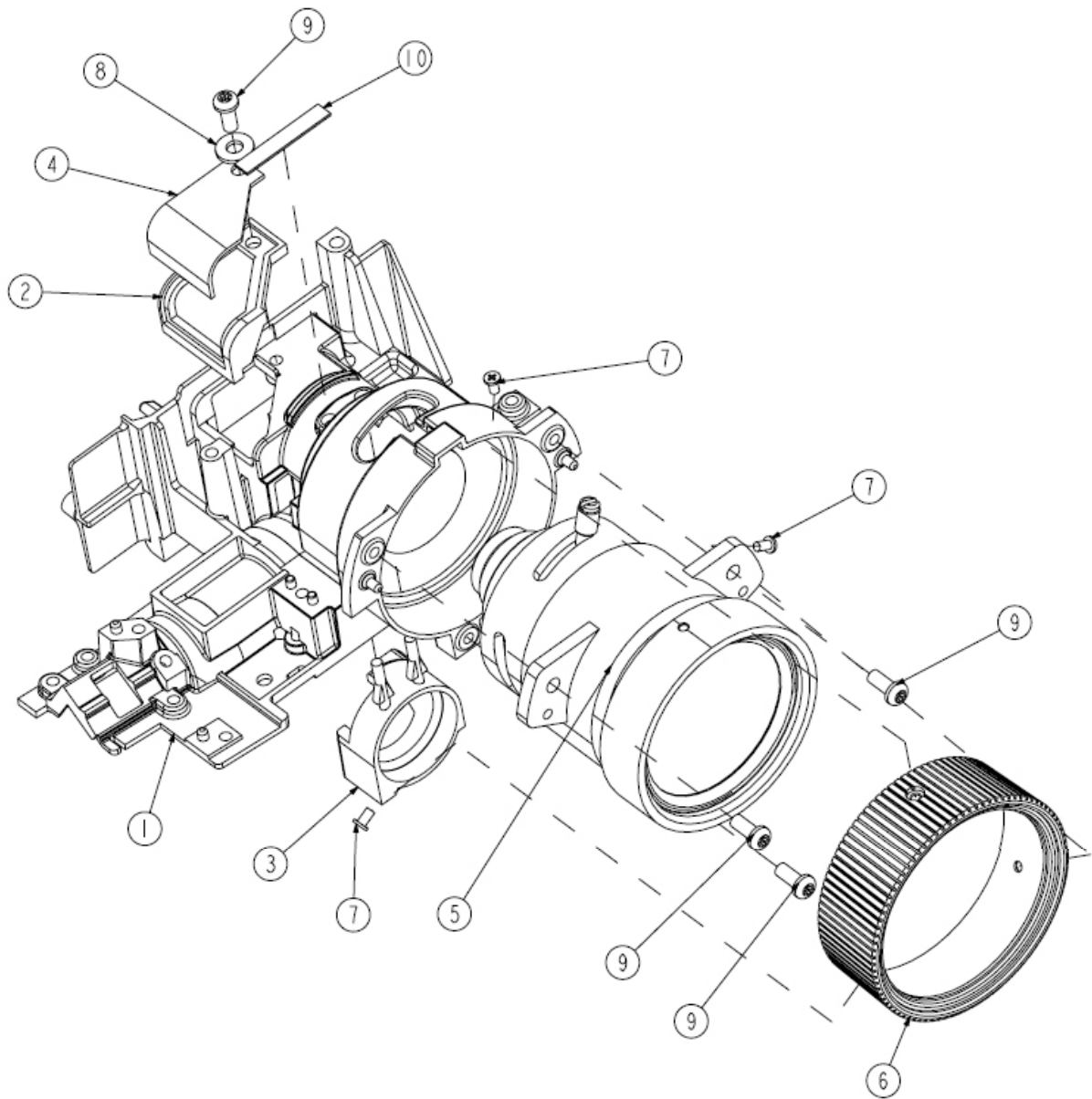
item	P/N	Rev	Description	Parts Supply
1	51.88N01G001	A	ENGINE BOTTOM COVER PC945,X15	NO
2	52.88N05G001	A	RELAY RUBBER,X15	NO
3	52.85808G001	A	PORON-LENS BLACK XB31	NO
4	23.88N02G001	A	YO MIRROR1 FOR X15	NO
5	61.88N01G001	A	ENGINE BASE MG,X15	NO
6	51.88N29G001	A	TAPE 3M J1350 FOR MIRROR 35*55mm EP721	NO
7	51.88N41G001	A	MYLAR FOR MIRROR DEAMETER 3.5mm	NO
8	51.88N43G001	A	MYLAR FOR RELAY BOTTOM	NO

Assy Bottom Case Module EP720/EP726



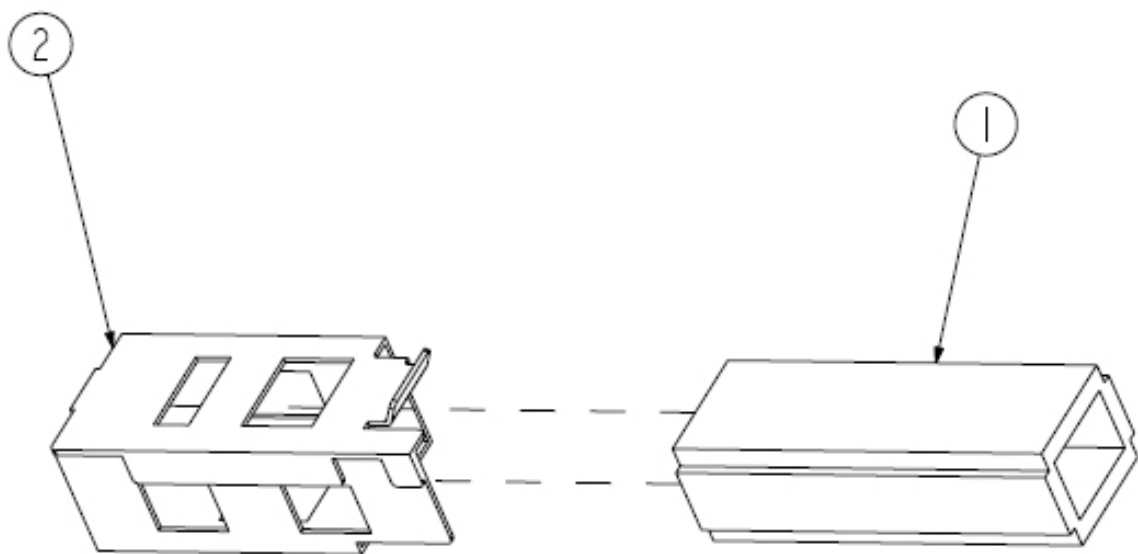
item	P/N	Rev	Description	Parts Supply
1	51.88N07G001	A	BOTTOM CASE PC LN-2520 (BLACK) EP721	
2	70.88N16G001	A	ASSY LAMP DRIVER MODULE EP721	NO
3	70.88N15G001	A	ASSY INTERLOCK SWITCH MODULE EP721	NO
4	70.88N14G001	A	ASSY LVPS SHEETMETAL MODULE EP721	NO
5	70.88N12G001	A	ASSY BLOWER MODULE EP721	NO
6	70.88N11G001	A	ASSY ELEVATOR MODULE EP721	NO
7	51.88N22G001	A	ELEVATOR FOOT PC MN3600H,EP721	
8	51.88N21G001	A	LINKER, ELEVATOR BUTTON PC MN3600H,EP721	
9	61.82Y22G001	A	ELEVATOR PUSH SPRING SUS304 D=φ4.4 d=φ0.4 L=10 DP715	NO
10	61.88N28G001	A	MAIN BOARD STAND-OFF M2.6X39.7mm	NO
11	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
12	52.88N06G001	A	FIX FOOT RUBBER,EP721	
13	52.88N07G001	A	ADJUSTABLE FOOT RUBBER,EP721	
14	86.0A123G024	A	HEX NUT M3*0.5P L2.4 Ni	NO
15	49.88N01G001	A	SUNON 60X20 AXIAL FAN	
16	52.88N13G001	A	SPONGE FOR BLOWER BOTTOM	NO
17	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO
18	61.88N23G001	A	POWER CONNECTOR FIX FRAME SECC EP721	NO
19	43.88N01G001	B	THERMAL SWITCH WITH BRACKET (KLIXON YS11) 100 DEG. C	
20	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
21	85.1A322G040	A	SCREW PAN MECH M2*4 BLACK	NO
22	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO
23	52.88N14G001	A	SPONGE FOR BLOWER TOP	NO
24	61.88N34G001	A	STAND-OFF FOR X15 ENGINE M2.6 X 16.75MM	NO
25	49.88N03G001	B	SPEAKER 2W 4OHM L=300mm EP721	
26	85.1C224G051	A	SCREW PAN MECH M4*5 COLOR W/TOOTH WASHER Cr3+	NO
27	85.3A126G060	A	NEW SCREW M=2.6 D=2.48-2.58 L=6.0 2.0MM	NO
28	49.88N02G002	A	SUNON 45X20 BLOWER WITH RUBBER	
29	75.87J01G101	B	ASSY LVPS MATRITEK 200W EP752(CHINA' S PROCESS)	
30	61.88N20G002	A	SHEET METAL TOP CASE ISOLATION SECC NEW EP721	NO

Pre-assy Engine Base EP720/EP726



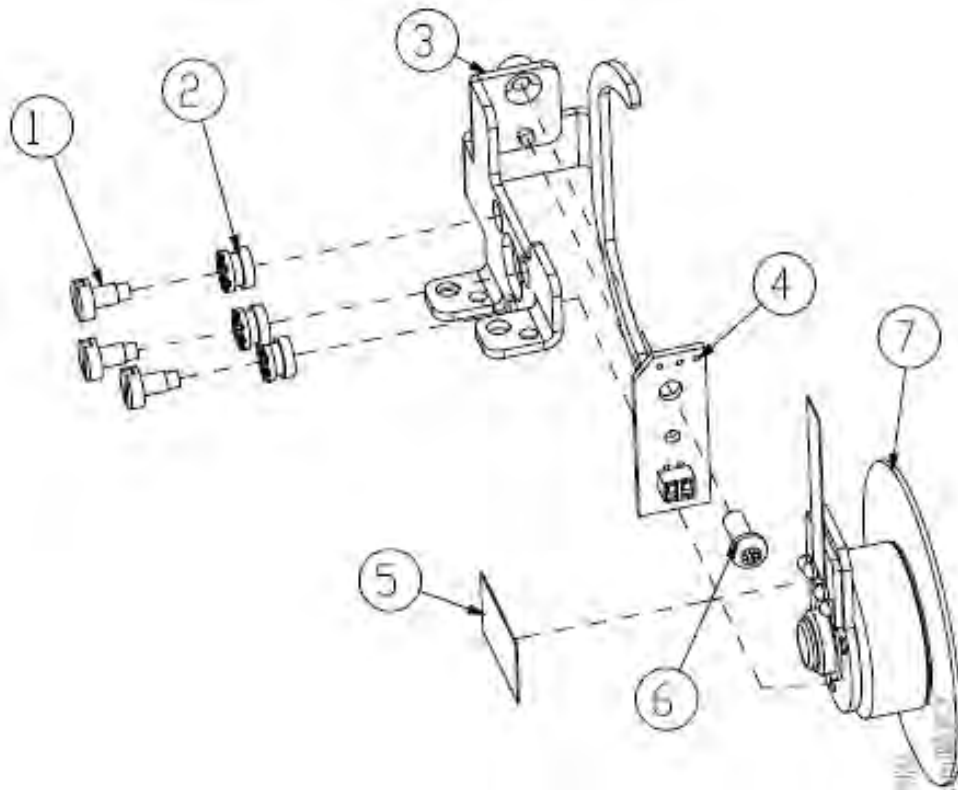
item	P/N	Rev	Description	Parts Supply
1	61.88N01G003	A	ENGINE BASE MG X15	NO
2	52.88N01G001	A	OFF RAY RUBBER,X15	NO
3	52.88N02G002	A	PROJECTION LENS RUBBER NEW X15	NO
4	61.88N05G001	A	OFF RAY PLATE AL5052,X15	NO
5	23.87M01G002	C	FPL30 PROJECTION LENS 1.1X NEW GREASE,VERSION C	NO
6	51.88N04G001	A	FOCUS RING PC MN3600H,EP721	
7	85.YA321G025	A	SCREW FLAT TAP M1.7*2.5 BLACK	NO
8	87.FL030G008	A	WASHER FLAT 7*3.1*0.8t PC PINGOOD WS-1M	NO
9	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
10	51.88N36G001	A	TEFLON 3.5*20mm 0.5t EP721	NO

Assy Rod Module EP720/EP726



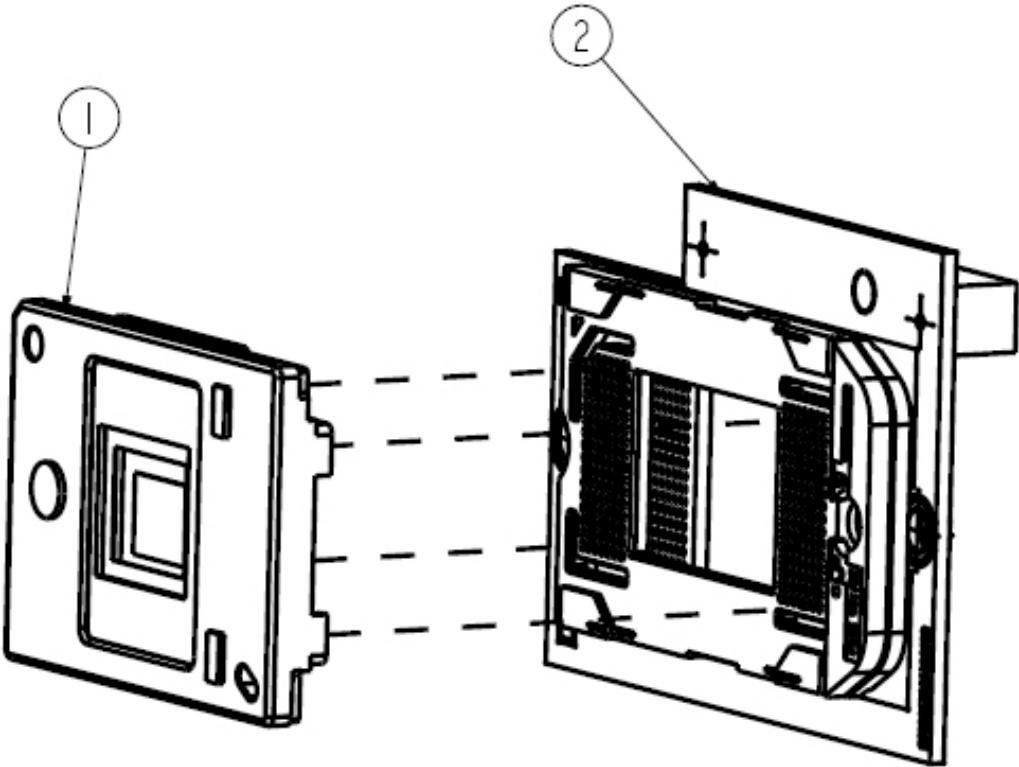
item	P/N	Rev	Description	Parts Supply
	70.88N21GR01	A	ASSY ROD MODULE EP721(RMA)	
1	23.88N17G004	A	OERLIKON STEP ROD FOR X15	NO
	23.88N17G002	A	PRODISC STEP ROD FOR X15	NO
2	61.88N14G001	A	ROD HOLDER SUS301,X15	NO

Assy Color Wheel Module EP720/EP726



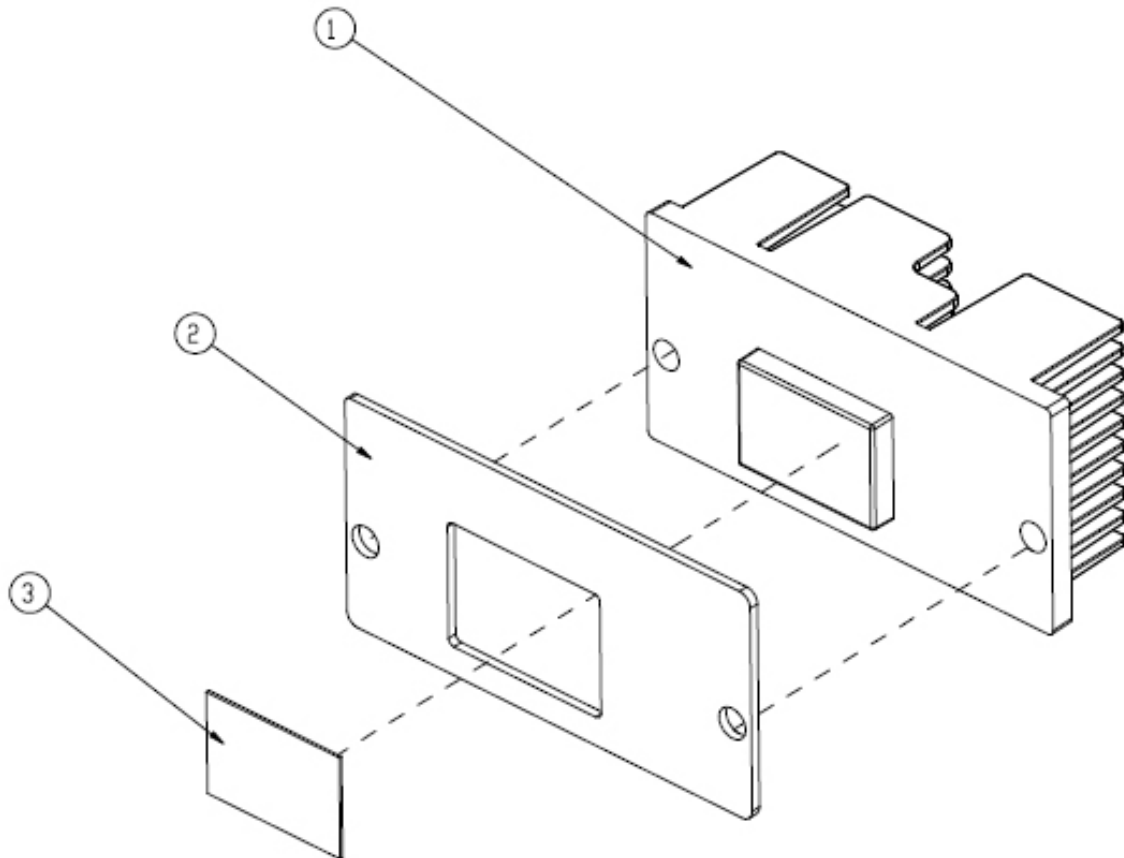
item	P/N	Rev	Description	Parts Supply
	70.88N19GR01	A	ASSY COLOR WHEEL MODULE EP721(RMA)	
1	61.83628G001	A	COLOR WHEEL SHOULDER SCREW, EzPro755	NO
2	52.83615G001	A	COLOR WHEEL DISC RUBBER, EzPro755	NO
3	61.88N10G001	A	COLOR WHEEL HOLDER SECC,X15	NO
5	51.82Y19G001	A	MYLAR FOR BALLAST PP 0.45t DP715	NO
7	23.88N19G001	A	YO NA32R CW R80Y30G84W90B76 FOR X15	NO
4	80.89U04G001	A	PCBA PHOTO SENSOR BOARD FOR EP720	
6	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO

Assy DMD Module EP720/EP726



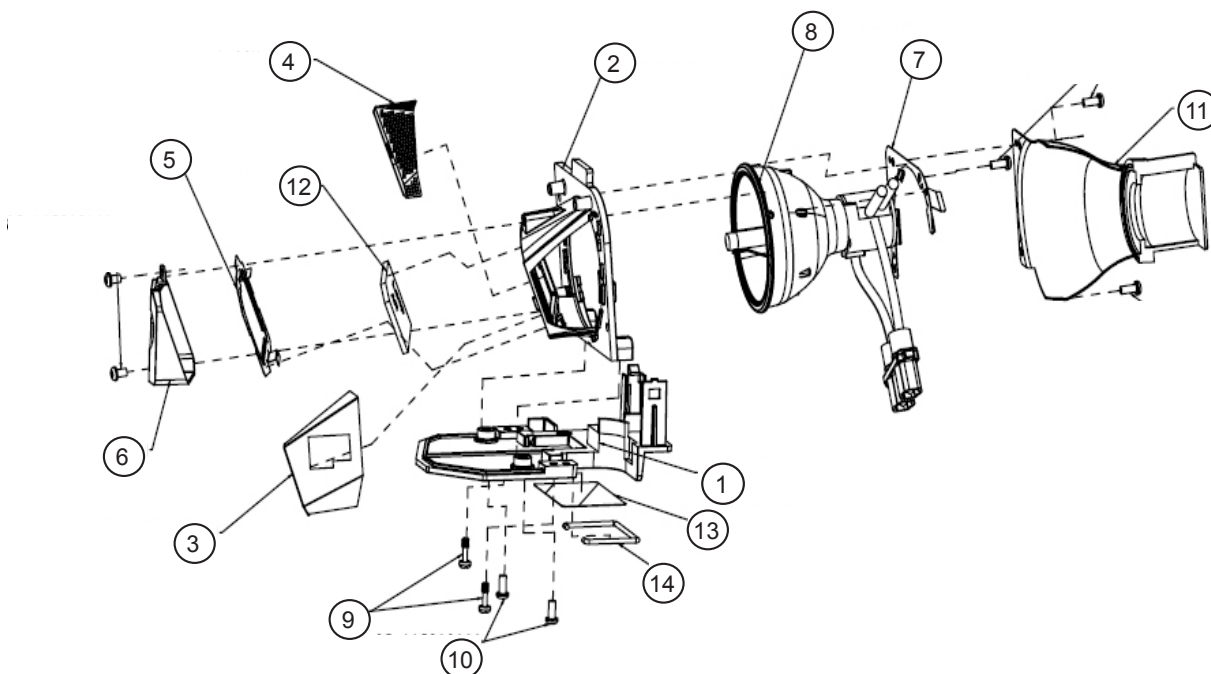
item	P/N	Rev	Description	Parts Supply
1	48.87K01G001	A	DMD Type-X 800x600 PIXEL 0.55" SVGA LVDS "TI" For EP720	
	48.87M01G001	A	DMD Type-X 1024x768 PIXEL 0.55" XGA LVDS For EP726	
2	80.89U01G001	C	PCBA MAIN BOARD FOR EP720	
	80.89V01G001	F	PCBA MAIN BOARD FOR EP726	

Pre-assy Heatsink Module EP720/EP726



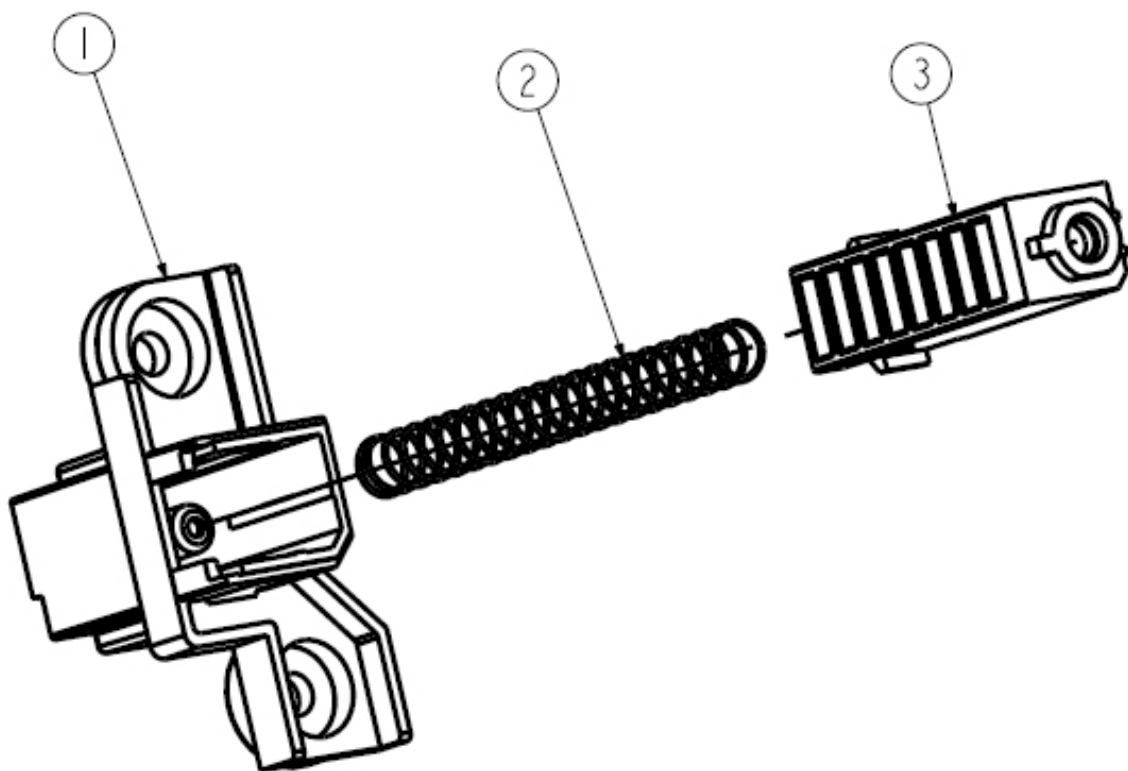
item	P/N	Rev	Description	Parts Supply
1	61.88N03G002	A	DMD HEAT SINK NEW AL1070 X15	NO
2	52.88N03G001	A	HEAT SINK RUBBER,X15	NO
3	52.87J01G001	A	DMD THERMAL PAD 25*17*0.5t FUJIPOLY SARGON GR-Hn	

Assy Lamp Module EP720/EP726



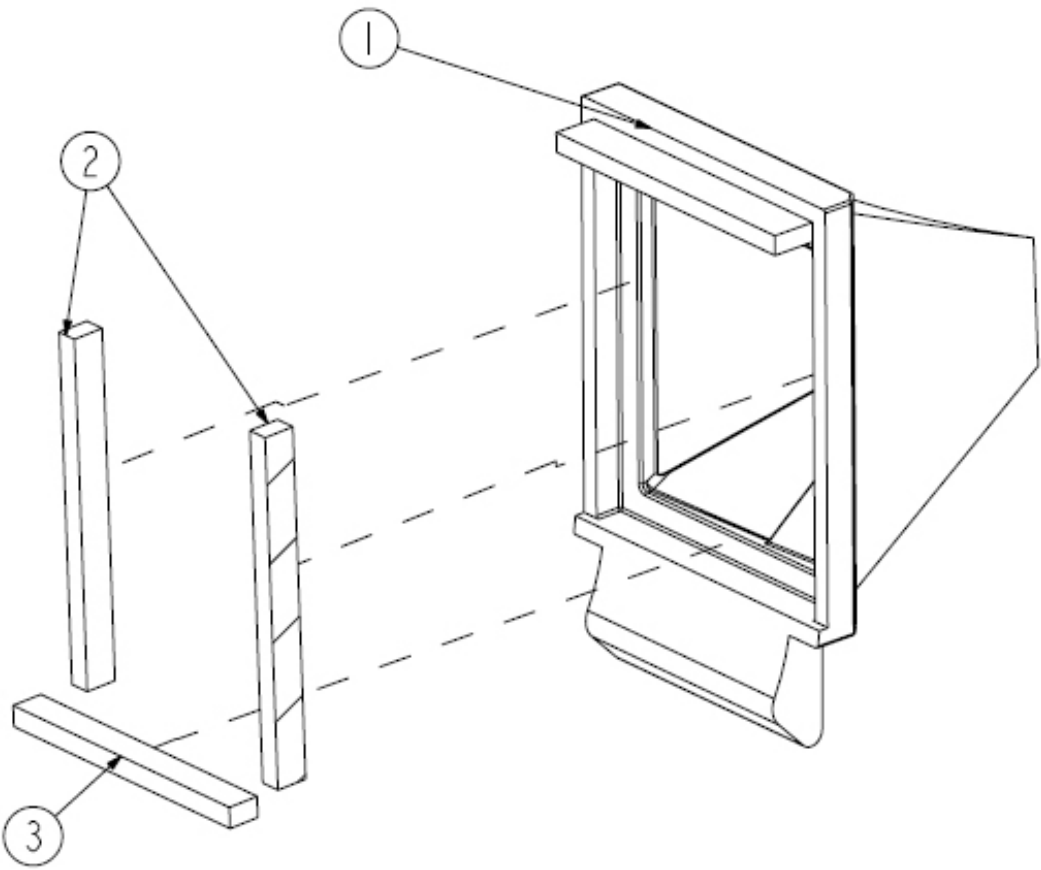
item	P/N	Rev	Description	Parts Supply
	SP.88N01GC01	A	LAMP MODULE FOR PROJECTOR EP721/EP727	
1	51.88N02G001	B	LAMP HOUSING PPS,X15	NO
2	61.88N02G001	A	LAMP HOLDER MG,X15	NO
3	61.88N06G001	B	LAMP MESH LEFT SUS301,X15	NO
4	61.88N07G001	A	LAMP MESH,RIGHT,SUS301,X15	NO
5	61.88N09G001	A	UV IR HOLDER SUS301,X15	NO
6	61.88N25G001	A	88N LEAKAGE HOLDER,AL,X15	NO
7	61.88N08G001	A	LAMP FIX SPRING-NEW SUS301 X15	NO
8	23.88K15G001	A	LAMP MODULE PHOENIX 180W FEX88	NO
9	61.85928G001	A	LAMP HOUSING SHOULDER SCREW SB21	NO
10	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
11	75.88N03G001	A	ASSY LAMP SHELL MODULE EP721	NO
12	23.88N10G002	A	UV-IR 24*25*2mm(5*5mm cut)_Add Dot ink mark_YO	NO
13	35.88N03G002	A	LAMP WARNING LABEL NEW EP721	NO
14	61.86808G002	A	LAMP CHANGER HANDLE SUS304 1.6d DP725 FOR CPC	NO

Assy Elevator Module EP720/EP726



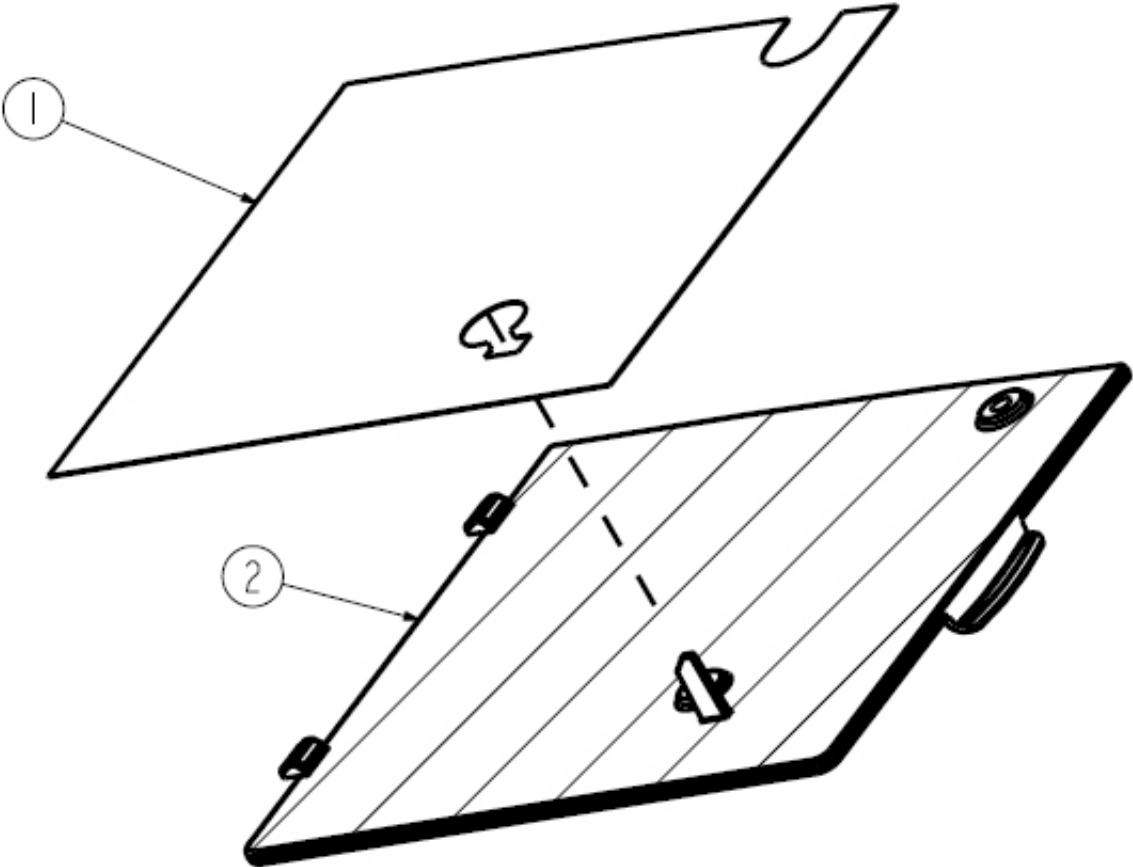
item	P/N	Rev	Description	Parts Supply
1	51.88N23G001	A	ELEVATOR HOUSING PC MN3600H,EP721	NO
2	61.82Y23G001	A	ELEVATOR FOOT SPRING SUS304 D=φ3.8 d=φ0.3 L=33.5 PD311	NO
3	51.88N24G001	A	ELEVATOR STEP PC MN3600H,EP721	NO

Assy Blower Module EP720/EP726



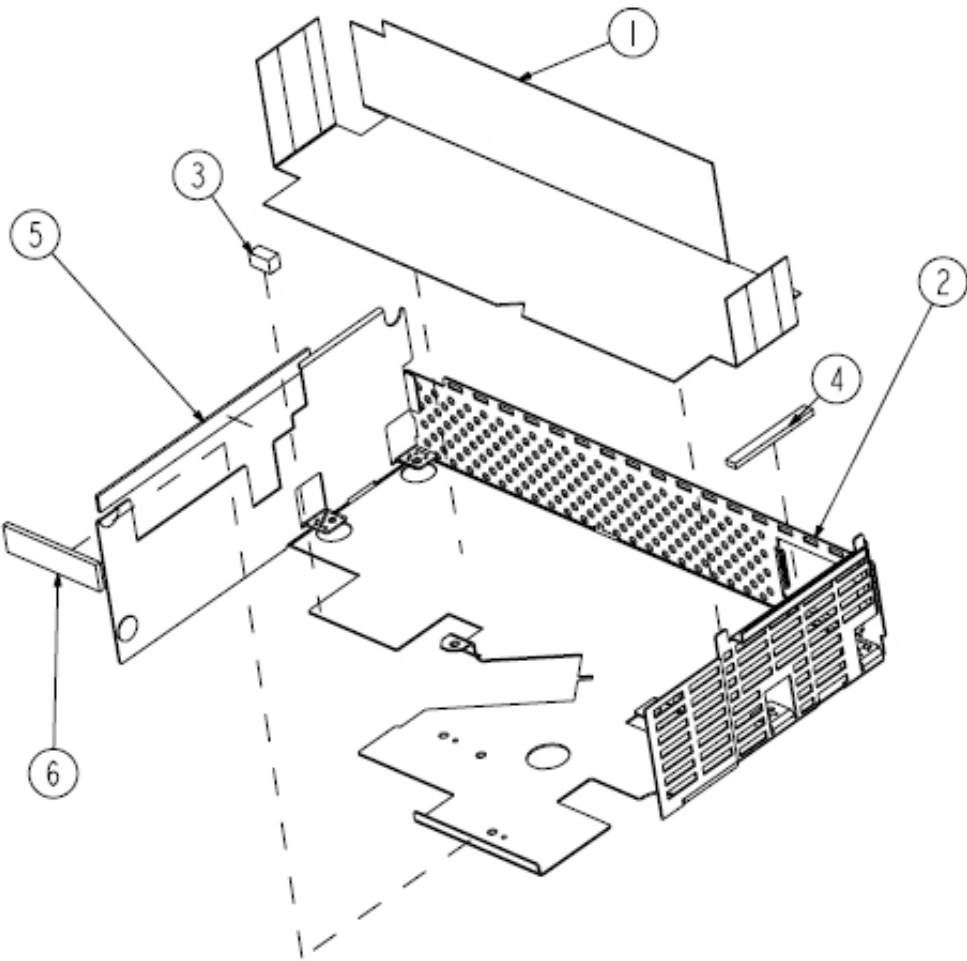
item	P/N	Rev	Description	Parts Supply
1	61.88N22G001	A	LAMP BLOWER DUCT AL ADC12,EP721	NO
2	52.88N09G001	A	SPONGE F12 26.7mmx2.5mmx1.6T	NO
3	52.88N10G001	A	SPONGE F12 22.7mmx2.5mmx1.6T	NO

Assy Lamp Cover Module EP720/EP726



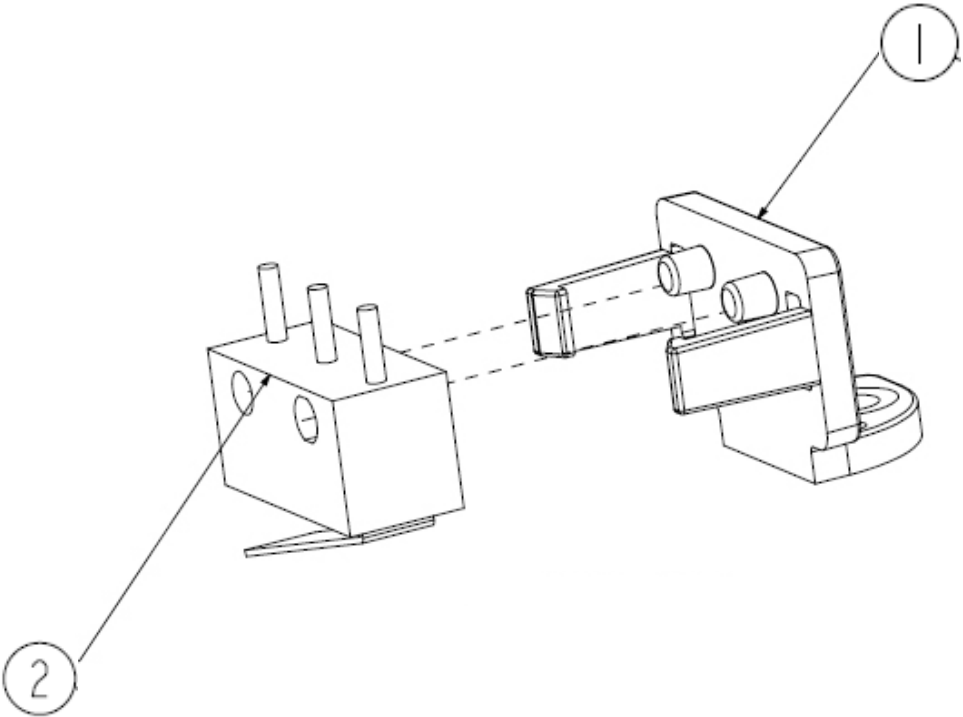
item	P/N	Rev	Description	Parts Supply
	70.88N22GR01	A	ASSY LAMP COVER MODULE EP721(SERVICE)	
1	61.88N30G001	B	LAMP COVER FOIL AL EP721	NO
2	51.88N09G001	A	LAMP COVER NORYL V1050B,EP721	NO

Assy LVPS Sheetmetal Module EP720/EP726



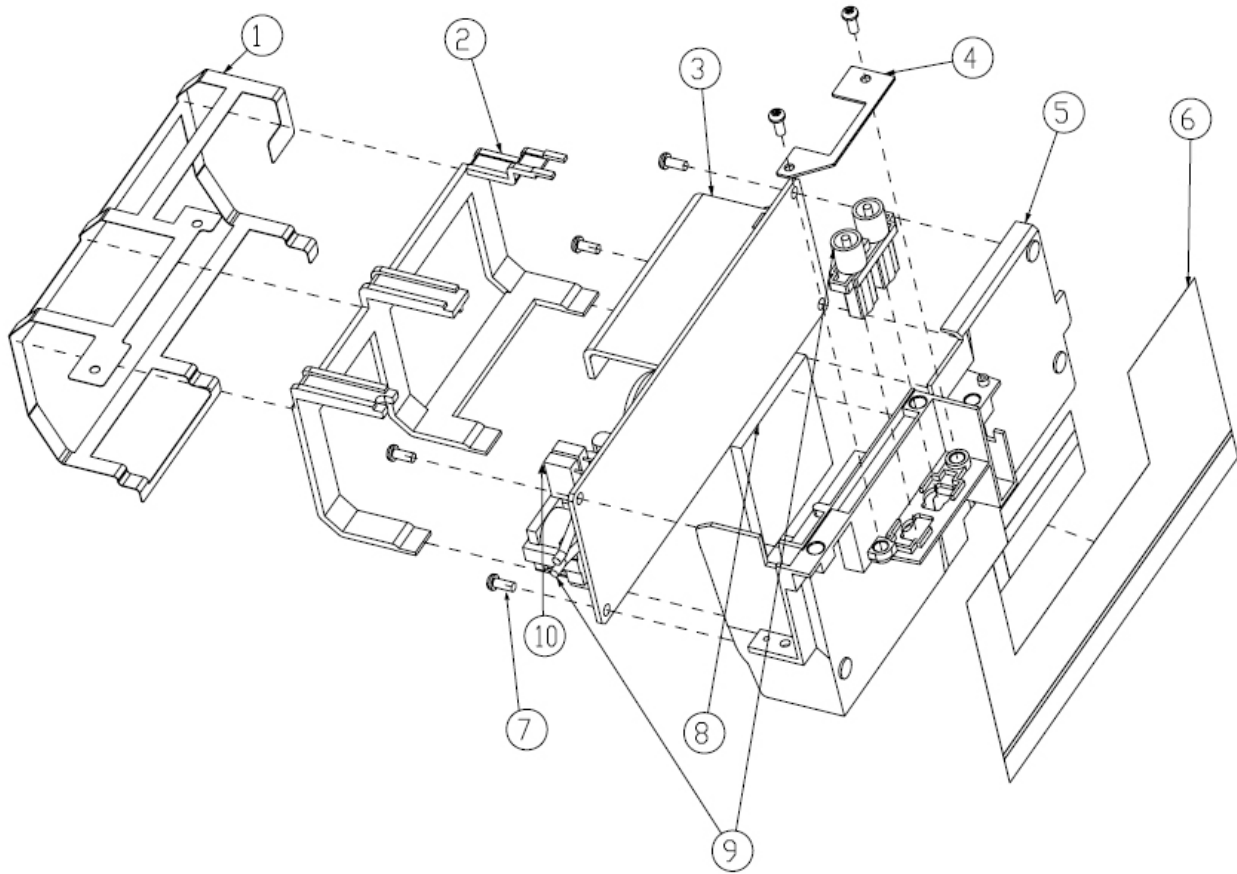
item	P/N	Rev	Description	Parts Supply
1	51.88N27G001	A	LVPS MYLAR EP721	NO
2	61.88N16G001	A	SHEET METAL LVPS SECC,EP721	NO
3	41.88N01G001	A	EMI GASKET W4.5 * L8.5 * H5.0mm EP721	NO
4	41.80W05G001	A	EMI GASKET 4*2*35mm	NO
5	41.82G13G001	A	EMI GASKET W6*L95*H1mm EP719	NO
6	41.82G02G001	A	EMI TOP COVER GASKET EP719	NO

Assy Interlock Switch Module EP720/EP726



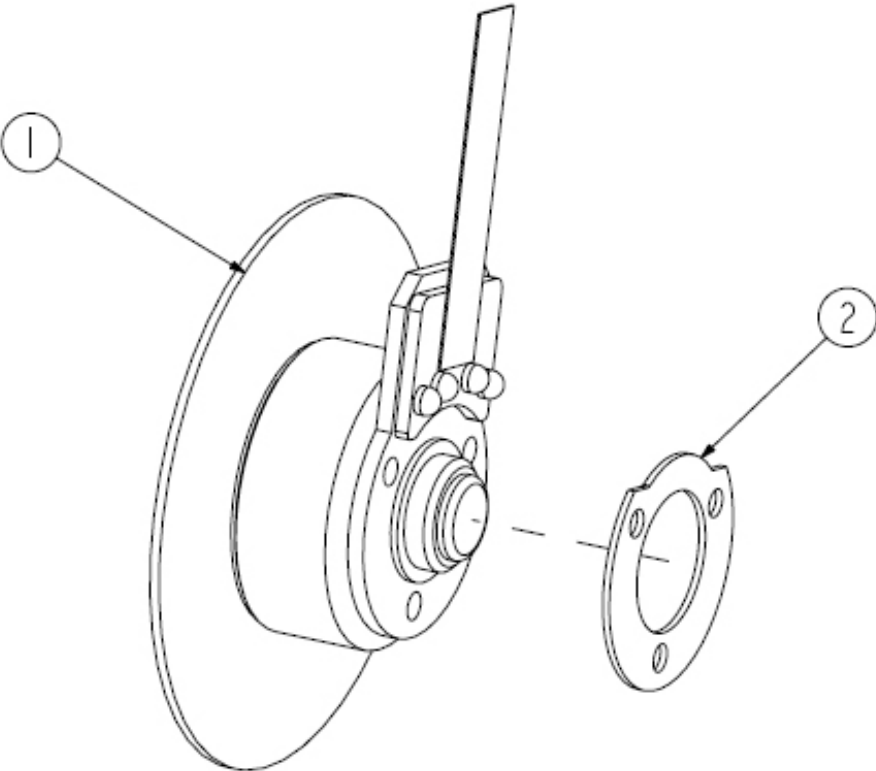
item	P/N	Rev	Description	Parts Supply
1	51.88N25G001	A	INTERLOCK SWITCH HOLDER PC LN-2520 (BLACK) EP721	NO
2	75.88N02G001	A	ASSY INTERLOCK SWITCH MODULE EP721	

Assy Lamp Driver Module EP720/EP726



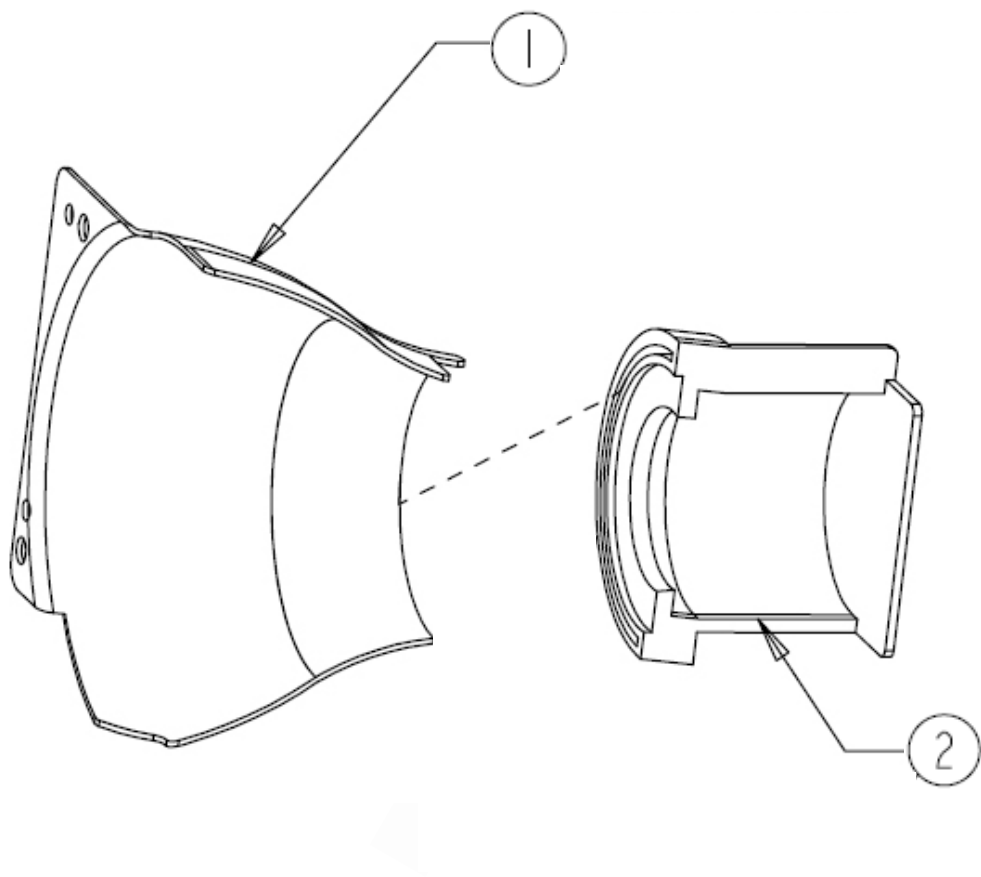
item	P/N	Rev	Description	Parts Supply
1	61.88N31G001	A	LAMP DRIVER EMI SHEETMETAL SUS301 EP721	NO
2	51.88N33G001	A	LAMP DRIVER EMI SHEETMETAL PROTECTOR PPS EP721	NO
3	75.88N01G001	B	ASSY HITACHI LAMPDRIVER 180W PS-272A-LS-200-18H	
4	61.88N21G001	A	LAMP CONNECTOR FIX FRAME SECC,EP721	NO
5	51.88N20G001	A	LAMP DRIVER FIX FRAME PPS,EP721	NO
6	61.88N33G001	A	LAMP DRIVER EMI FOIL COPPER EP721	NO
7	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
8	52.88N19G001	B	LAMP DRIVER THERMAL PAD 42*39*3.0t SARCON GR-d	NO
9	42.83M06G001	B	CABLE W.A. 2P #20 180mm LAMP DRIVER TO LVPS 2400MP	NO
10	42.80J08G001	A	CABLE W.A. 5P #28 170mm BALLAST TO M/B	NO

Assy Oerl Ikon Module EP720/EP726



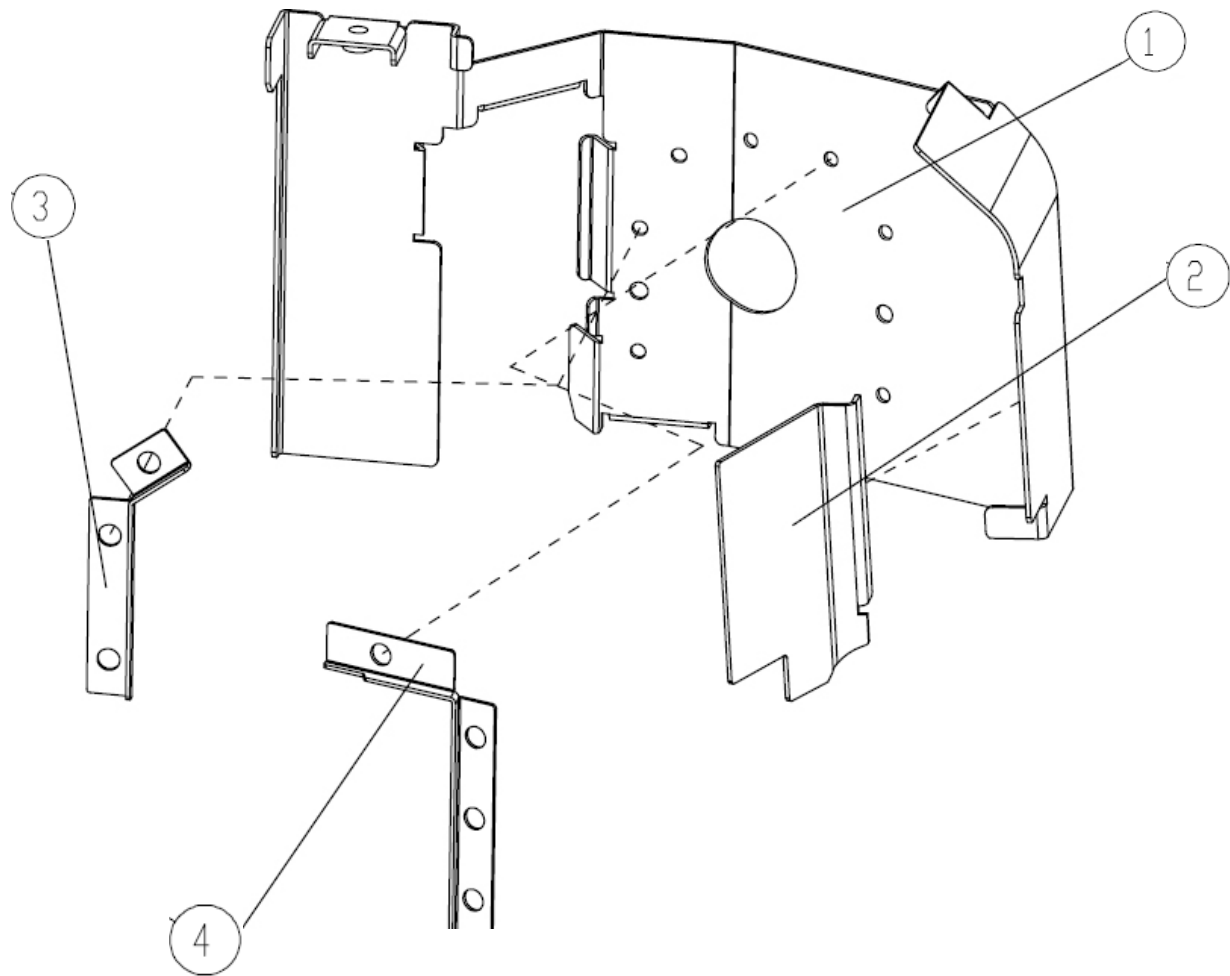
item	P/N	Rev	Description	Parts Supply
1	23.88N19G002	A	OERLIKON 5S CW FOR X15 , R80Y30G84W90B76 WITH sRGB2 CATING	NO
2	51.88N34G001	A	MYLAR PLATE FOR OERLIKON C/W EP721	NO

Assy Lamp Sheet Module EP720/EP726



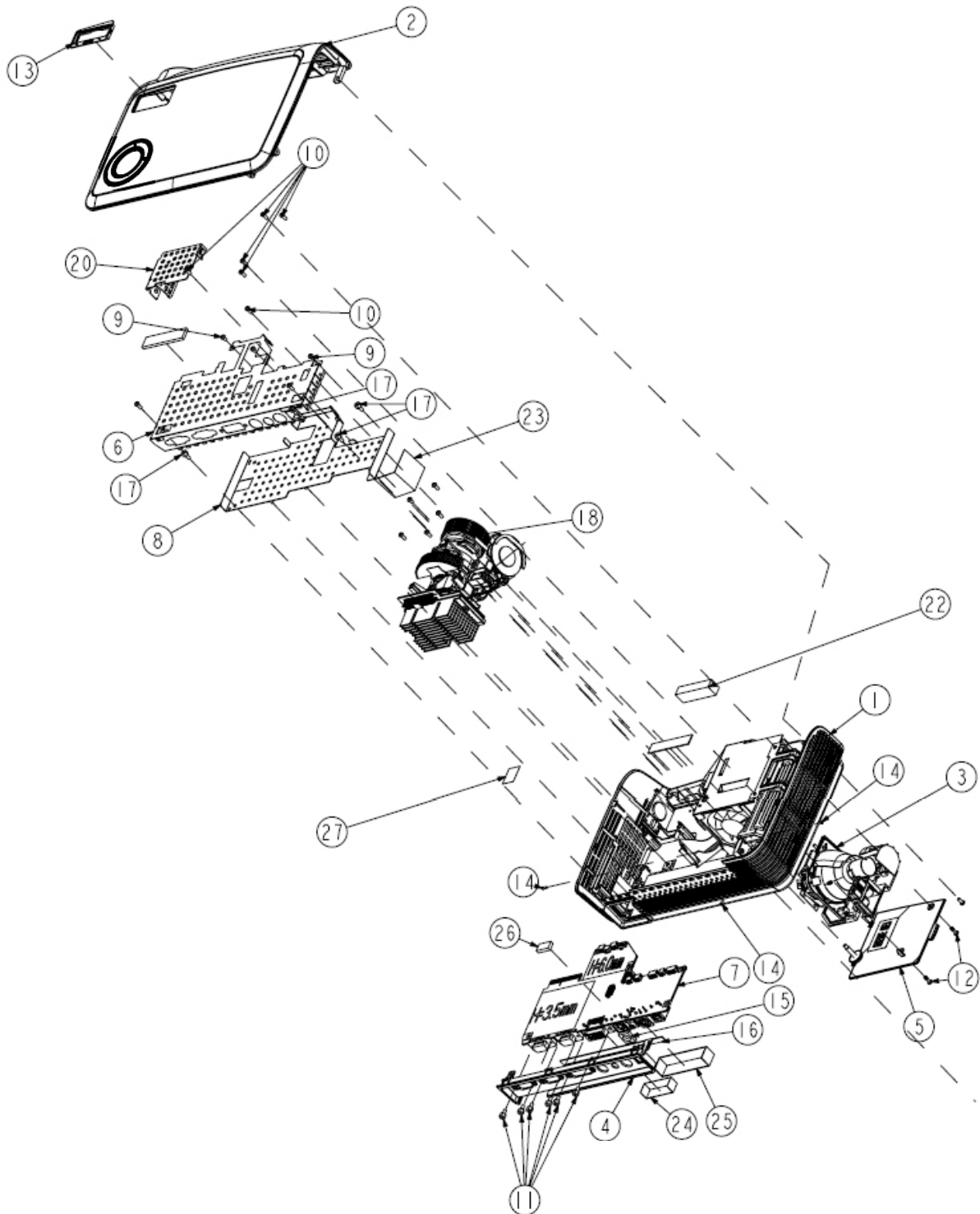
item	P/N	Rev	Description	Parts Supply
1	61.88N04G002	A	LAMP SHELL-NEW AL5052 X15	NO
2	52.88N08G002	A	LAMP SHELL RUBBER NEW X15 88N	NO

Assy Sheet Metal,CW Lamp Isolation EP720/EP726



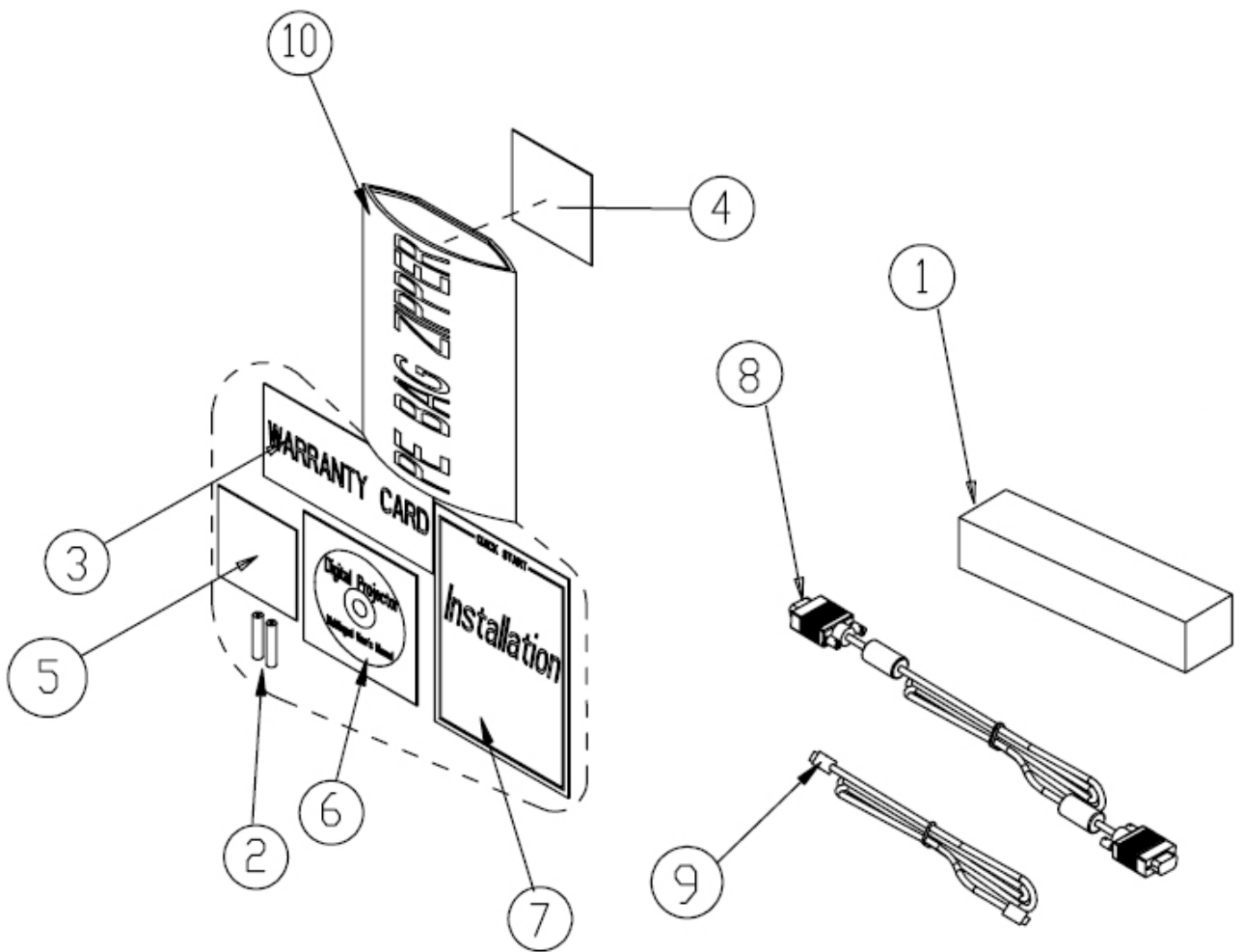
item	P/N	Rev	Description	Parts Supply
1	61.88N19G001	A	SHEET METAL,CW LAMP ISOLATION SECC,EP721	NO
2	61.88N36G001	A	88N FRONT AIRFLOW GUIDE EP721	NO
3	61.88N26G001	A	88N CW LAMP COVER RIGHT,AL,EP721	NO
4	61.88N27G001	A	88N CW LAMP COVER LEFT,AL,EP721	NO

DC. EP720/EP726



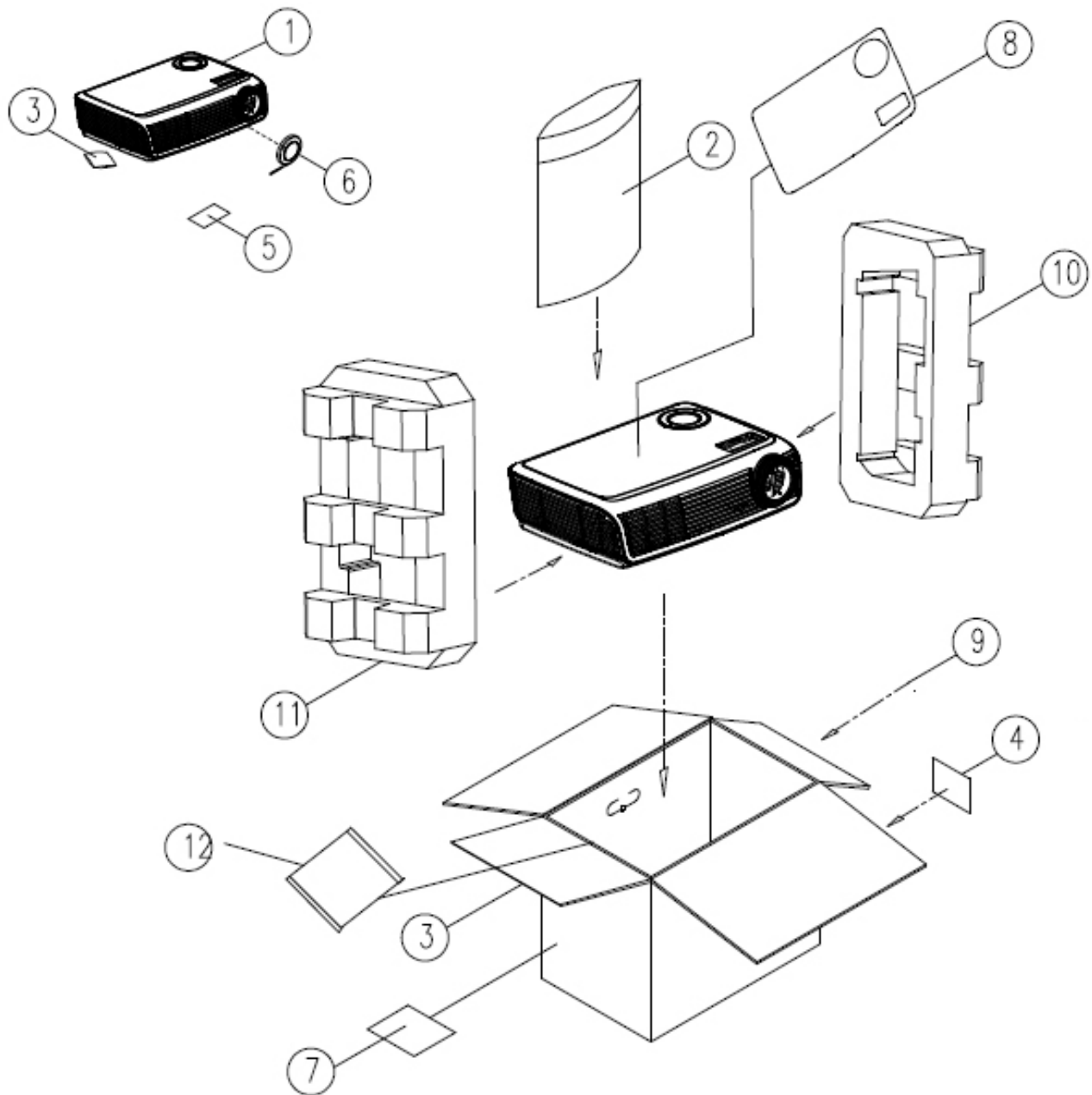
item	P/N	Rev	Description	Parts Supply
1	70.88N01G001	A	ASSY BOTTOM CASE MODULE EP721	NO
2	70.89U02G001	A	ASSY TOP CASE MODULE EP720	NO
3	70.88N10G001	A	ASSY LAMP MODULE EP721	NO
4	51.89U01G001	A	IO COVER PC MN 3600H,EP720	
5	70.88N13G001	A	ASSY LAMP COVER MODULE EP721	NO
6	61.88N18G001	A	SHEET MEATL IO SUS301,EP721	NO
7	80.89U01G001	C	PCBA MAIN BOARD FOR EP720	
8	61.88N17G001	B	SHEET METAL BTM M/B SECC,EP721	NO
9	85.1A126G040	A	SCREW PAN MECH M2.6*4 Ni	NO
10	85.1A526G060	A	SCREW PAN MECH M2.6*6 Ni NYLOK	NO
11	85.005AGG040	A	SCREW I/O STEEL #4-40UNC*H4*L5.5 NYLOK	NO
12	61.85928G001	A	LAMP HOUSING SHOULDER SCREW SB21	NO
13	51.88N12G001	A	ZOOM RING COVER PC MN3600H,EP721	
14	85.4A321G050	A	SCREW FLAT HEAD MECH M1.7*5 D2.5 BLACK	NO
15	41.85M09G001	A	EMI GASKET W13*H3*L13 mm , 9mm	NO
16	41.88N02G001	A	EMI GASKET W6*H1*L140mm	NO
17	61.88N29G001	A	MAIN BOARD STAND-OFF M2.6X4.0mm	NO
18	70.88S03G001	A	ASSY ENGINE MODULE EP723	NO
19	35.89U01G001	A	I/O COVER LABEL EP720	NO(Y)
20	61.88N35G001	B	SHEET METAL FOR EMI SECC EP721	NO
21	85.1A523G060	A	SCREW PAN MECH M3*6 NYLOK, GREEN	NO
22	52.80N07G001	A	M/B ABSORPTION NOISE CVS 15*t10mm L40 HD70	NO
23	51.88N37G001	B	MYLAR FOR ENGINE EP721	NO
24	51.88N38G001	A	MYLAR FOR DVI EP721	NO
25	51.88N39G001	A	MYLAR FOR IO EP721	NO
26	52.88N22G001	A	M/B THERMAL PAD GR-b 16.3X8.8X3.5t	NO
27	51.81541G001	A	TAPE 3M J350 17*30mm	NO

A.K. EP720/EP726



item	P/N	Rev	Description	Parts Supply
1	45.89U01G001	A	REMOTE CONTROLLER WITHOUT LASE	
2	46.80301G101	A	BATTERY #7 1.5V PANASONIC	NO
3	36.00006G003	A	WARRANTY CARD,TWN.GREEN	
4	36.00018G001	B	EXTENDED WARRANTY REGISTRATION FORM,USA FOR LPP SERIES	
5	36.00020G001	A	QUICK TROUBLESHOOTING GUIDE MULTILINGUAL	
6	36.89U01G001	B	USER'S GUIDE MULTILINGUAL (CD)	
7	36.89U02G001	A	QUICK START CARD MULTILINGUAL	
8	42.00200G002	A	CABLE VGA 15P 1.8M BLK EP739	
9	42.00280G001	A	CABLE USB(A) TO USB(B) 2M BLK 2100MP	
10	51.86213G002	A	PE BAG ZIPPER #9 W/RECYCLING	

D.P. EP720/EP726

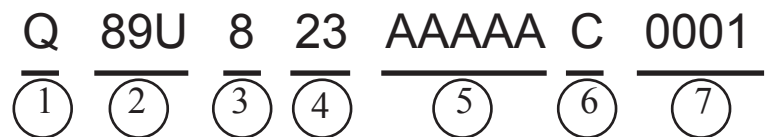


item	P/N	Rev	Description	Parts Supply
1	DC.89V01G001	A	D.C. EP726	
2	51.52109G003	A	PE BAG 450*350*0.07 FOR OPTOMA	
3	57.00001G001	B	PACK SIO2 DRIER 20g	N
4	35.52302G091	A	LABEL CARTON 108*92 BLANK	
5	35.88N02G001	A	SPEC LABEL EP721	
6	75.88N04G001	A	ASSY LENS CAP MODULE EP721	
7	35.86821G001	A	LABEL PREVENT OPEN DIM28MM	
8	51.88N47G001	A	TOP CASE PROTECTION FILM EP721	
9	55.89U01G001	A	CARTON AB OPTOMA LOGO EP720	
10	56.89F01G001	A	CUSHION-L EPE HD65	
11	56.89F02G001	A	CUSHION-R EPE HD65	
12	55.89F03G001	A	PAPER SUPPORT BOX HD65	

Appendix B

I. Serial Number System Definition

Serial Number Format for EP720



- ① : Q = Customer Code (ex: Q = Optoma)
- ② : Product Code (ex: 89U = EP720)
- ③ : Last number of the manufactured year (ex:2008- 8)
- ④ : Week of the manufactured year (ex: 23= the twenty-third week of the manufactured year)
- ⑤ : Code
- ⑥ : Manufactory Location (ex: C = China)
- ⑦ : Serial code (from 0001~)

EX: Q89U823AAAAAC0001

This label represents the serial number of EP720, which is produced at CPC on the twenty-third week of 2008. Its serial code is 0001.

I. Serial Number System Definition

Serial Number Format for EP726

Q	89V	8	14	AAAAA	C	0001
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
①	②	③	④	⑤	⑥	⑦

- ① : Q = Customer Code (ex: Q = Optoma)
- ② : Product Code (ex: 89V = EP726)
- ③ : Last number of the manufactured year (ex:2008- 8)
- ④ : Week of the manufactured year (ex: 14= the fourteenth week of the manufactured year)
- ⑤ : Code
- ⑥ : Manufactory Location (ex: C = China)
- ⑦ : Serial code (from 0001~)

EX: Q89V814AAAAAC0001

This label represents the serial number of EP726, which is produced at CPC on the fourteenth week of 2008. Its serial code is 0001.

II. PCBA Code Definition

PCBA Code for Projector

<u>A</u>	<u>B</u>	<u>XXXXXXXXXX</u>	<u>C</u>	<u>XXX</u>	<u>EEEE</u>
①	②	③	④	⑤	⑥

- ① : ID
- ② : Vendor Code
- ③ : P/N
- ④ : Revision
- ⑤ : Date Code
- ⑥ : S/N